I-88-1B

Ontario

Ontario Automobile Insurance Board

Industry-Wide Hearing
Part 2

Rate Making
Methodology

DECISION WITH REASONS

I-88-1B

IN THE MATTER OF the Ontario Automobile Insurance Board Act, 1988, S.O. 1988, c. 18;

AND IN THE MATTER OF an industry-wide hearing by the Ontario Automobile Insurance Board pursuant to Section 20 of the said Act.

BEFORE: M. Patricia Richardson
Vice Chair and Presiding Member

Alvin Field
Member

Bhagwant Persaud
Member

Gilles Racicot
Member

October 20, 1988

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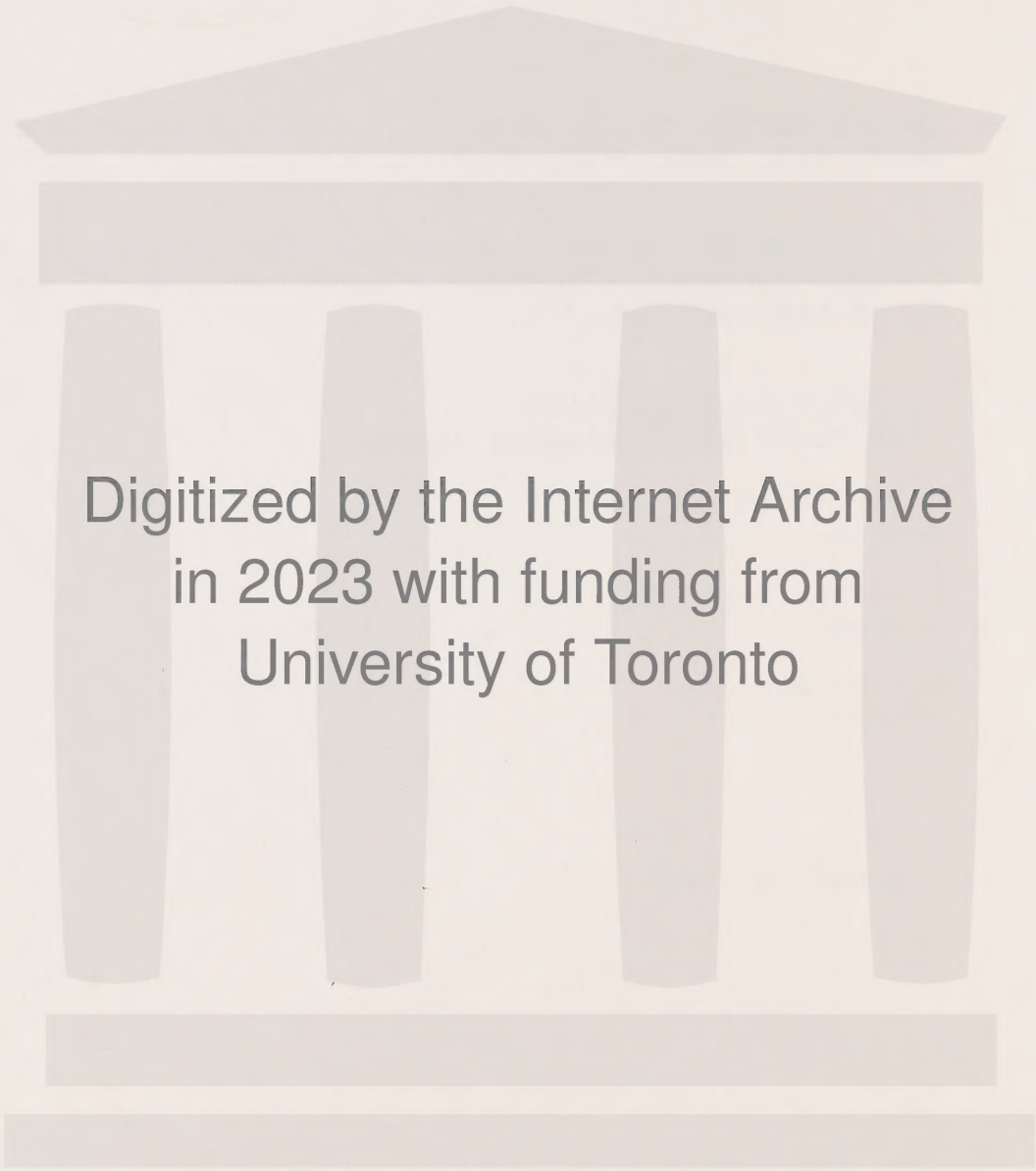

EXECUTIVE SUMMARY

This is the decision with reasons of the Board for Hearing No. 2 in the Industry-Wide Hearing that the Board called on its own motion (see Appendix A). The Board in this proceeding (1) determines the general and interim rate making methodologies to be used by the Board in setting rates; (2) considers the impact of the lack of data upon which to base initial rates and of the short time frame within which such rates must be set; and (3) determines the general procedures and forms to be used by insurers in requesting rate deviations. During the course of the hearing, three other major issues were considered by the Board. These are (1) whether a uniform rating algorithm should be adopted by the Board; (2) whether the Board should set benchmark rates or ranges or rates; and (3) the propriety of a contingency provision to offset for systematic bias in the rate making process.

Chapters 1 to 3 are general introductory chapters that deal with procedural matters and preliminary comments of the Board. The preliminary comments relate to the Board's views concerning the impact on insurers of the rate making methodologies that the Board adopts, and the need for judgment and flexibility within the framework of the Board's rate making methodologies.

Chapter 4 deals with interim rate making, and, in particular, difficulties arising out of the unavailability of Ontario data and time constraints. Prior to data being available under the Board Statistical Plan, the Board will use data from collateral sources, including data from foreign jurisdictions. Reliance will be placed on Ontario data to the extent possible.

Chapter 5 deals with the general methodologies proposed by the consultant engaged by the Board (Mercer) for the making of rates. The Board accepts that these general methodologies are consistent with the Statement of Principles Regarding Property and Casualty Insurance Ratemaking, adopted by the Casualty Actuarial Society, and that no party proposed a comprehensive alternative methodology to the Mercer methodology. The Board adopts the general methodologies, but makes modifications to certain aspects of them in the light of the evidence at the hearing. In particular, the Board agrees that the general rate making formula should contain an explicit contingency provision to offset for systematic bias in the rate making process.

In Chapter 6, the Board deals with the question of a uniform policy-rating algorithm. The Board decides that it has jurisdiction to adopt such an algorithm, and that, as a matter of policy, such an algorithm should be required. In order to permit insurers to begin programming their systems, the Board adopts a generalized formula of the sort set out in Appendix E. A

technical committee will be formed to consider the adequacy and completeness of the generalized formula. The committee is to report back to the Board by November 4, 1988, and the generalized formula recommended by the committee will be introduced as evidence in Hearing No. 4.

Chapter 7 deals with the question of rate ranges. The Board determines that, as a general proposition, ranges of rates should be set by the Board for the prescribed classes of risk exposure. The Mercer evidence outlined seven options available to the Board with respect to the structure of the ranges, and suggested a number of ways in which the width of the ranges could be determined. The Board determines that the questions of the structure of the ranges and the width of the ranges will be referred to Hearing No. 4. In the meantime, a study of existing true rate dispersion will be undertaken and introduced as evidence in Hearing No. 4.

Chapter 8 deals with issues respecting deviation procedures. The Board adopts the deviation procedures recommended by Mercer as the basis of its information requirements for deviation requests. The Board will, however, grant exemptions from certain of these information requirements, or require additional information, on a case-by-case basis. The Board decides that it has jurisdiction to require group filings, but refers the

question whether, as a matter of policy, the Board should exercise this jurisdiction to Hearing No. 4.

Chapter 9 deals with two miscellaneous issues. The first concerns the methodology to govern rates for the Facility Association and non-standard insurers. The Board determines that the general rate making methodologies proposed by Mercer to govern industry-wide rates should apply to the Facility Association and non-standard insurers. The Board also refers the question of the timing of the establishment of rates and rate ranges to Hearing No. 4.

CONCLUSIONS AND RECOMMENDATIONS

CHAPTER 4

1. For purposes of rate making in the interim period, prior to data being available under the Board Statistical Plan, the Board will have recourse to collateral sources of information, including data from foreign jurisdictions.

2. Reliance will be placed on Ontario data to the extent possible. Moreover, the use of collateral data will be fully disclosed, supported and documented at the time rates are proposed, and will be subject to testing in Hearing No. 4 and at industry-wide rate hearings in subsequent years.

CHAPTER 5

1. The Board adopts the general rate making methodologies proposed by Mercer in Exhibit 5.1, except to the extent that these methodologies are modified by the recommendations that follow.

Average Province-Wide Pure Premium

Pure Premium vs. Loss Ratio

2. The pure premium method will be adopted for the initial rate making process. Further study will be given to the loss ratio method with a view to assessing its desirability as the method to be employed in the long term.

Adjustment for Semi-Annual Policies

3. For the initial rate making process, a factor of 50 percent should be used to calculate the premium for semi-annual policies.

4. Board Staff will devise a questionnaire, which will be sent to insurers, to determine current industry practices with respect to policy terms, billing procedures and receipt of premiums.

5. The results of this survey will be used to determine an appropriate factor for semi-annual policies in the future. The factor chosen will be subject to testing at a future industry-wide rate hearing.

Data Segmentation

6. For purposes of both interim and ultimate rate making, expected future claim costs should be estimated separately for each limit of liability. A similar approach should be used for physical damage coverages by deductible.

7. Rates should be established in an amount sufficient to avoid a shift in the distribution of policies by limit.

Number of Years of Historical Claims Data

8. a) In arriving at the average province-wide pure premium, data from the most recent accident year, valued at 15 months, should be used.

   b) Actuarial judgment should be applied to this data, and it should be supplemented, where appropriate, with data from additional years of claims experience to smooth for aberrant conditions.

Claim Development Factor

9. a) Subject to recommendation 9(b), the Mercer methodology with respect to a claim development factor should be employed, including, where appropriate, the use of claims "counts and averages".

b) The claim development factor should be analyzed separately for the bodily injury and property damage components of third party liability coverage. If, in the interim period, it is determined, on the basis of actuarial judgment, that the coding is unreliable, the combined data should be used to adjust the results.

Claims Costs Trend

10. Claims cost trending procedures should be based on a combination of (1) the trend of historical pure premium; (2) the trend of historical claim frequency and historical severity, determined separately and then combined; and (3) the trend of some external index related to the cost of automobile insurance.

11. The appropriate weighting of the trend factors should be determined in Hearing No. 4.

12. Separate trend factors should be developed for bodily injury and property damage. If, in the interim period, it is determined, on the basis of actuarial judgment, that the coding of bodily injury and property damage is unreliable, the two factors should be combined and the combined data used to adjust the results.

13. Where more than one year of claims data is used, trend factors using the current costing method should be adopted.

14. Known loss costs based on an experience period of 15 months should be used for purposes of trending.

15. For the interim period, trending should be based on the most recent six accident years, valued at 15 months. Ultimately, trends should be based on experience developed at quarterly intervals, using data from the most recent four quarters.

Allocated Loss Adjustment Expense

16. The allocated loss adjustment expense should be included in the loss experience for all coverages.

Excess Claims Procedure

17. In the interim period, judgment should be applied to accident year data to determine whether it contains catastrophe claims. The current IAO catastrophe factor of 2 percent should then be applied to the data as adjusted.

18. For purposes of ultimate rate making, both the method proposed by Mercer (paragraph 5.55) and that proposed by the industry (paragraph 5.56) should be employed, and judgment applied to the results.

19. Wind and water losses should be coded by the industry and reported under the Board Statistical Plan.

Expenses

20. The Board adopts the concept of an expense constant.

21. On an interim basis, the expense constant should be imposed on a per exposure basis.

22. The Board will conduct a study to determine the basis upon which general operating expenses are incurred, the results of this study to be used to determine whether, for purposes of ultimate rate making, the expense constant should be imposed on a per policy, per exposure, or per coverage basis, or on the basis of some combination of these items.

23. The general rate making methodology should reflect the current treatment of premium taxes and commissions payable to brokers and agents as premium variable expenses.

24. a) The OHIP subrogation charge should be included as part of the calculation of the third party liability pure premium.

b) The OHIP subrogation charge to be used should be based on the average percentage of total third party liability premium used by OHIP to charge companies for the most recent calendar year.

c) The charge should be adjusted for any increase or decrease in OHIP costs projected to occur during the effective period of the rates or ranges of rates, and should then be translated into an appropriate percentage, to be applied to the third party liability pure premium only. The calculation used for this conversion should contain an explicit factor to adjust for the effects of the expense constant.

d) Details of the calculation and any assumptions should be fully disclosed when the rates or ranges of rates are proposed.

Age and Symbol Drift

25. a) Subject to modification in the event the Board adopts another vehicle classification and rating methodology, the method of accommodating age and symbol drift proposed by Mercer should be employed.

b) Whether age and symbol drift should be measured over more than one year should be determined on the basis of actuarial judgment, once the data has been examined.

Balancing Margin

26. The Panel for Hearing No. 3 will decide between the Bass "balancing margin" model and the Kalymon "underwriting margin" model. The figure(s) that flow(s) from the selected model will be utilized in the general rate making formula arising out of this Decision.

Contingency Provision

27. The rate making methodology should contain an explicit provision, to be added to the target ROE, to offset for systematic bias in the rate making process ("systematic bias factor"). The systematic bias factor could be a positive, negative or neutral factor.

28. In the long term, the systematic bias factor should be established with reference to the difference between the target ROE established by the Board and the ROE actually achieved under Board-set rates over

a period of 10 to 12 years, as adjusted to reflect the fact that individual insurers may have chosen rates other than the benchmark rates for non-actuarially-based reasons.

29. The industry should be permitted to attempt to establish an interim systematic bias factor on an industry-wide basis in Hearing No. 4.

30. If the industry is unable in Hearing No. 4 to adduce evidence, satisfactory to the Board, that establishes an appropriate industry-wide systematic bias factor, individual companies may realize a systematic bias factor during the interim period as set out in recommendation 31.

31. An individual company may choose a rate within the range of rates permitted by the Board that includes its own estimate of an appropriate systematic bias factor. Should the range of rates be too narrow to accommodate such a factor in any given case, the insurer may apply to the Board for a deviation, and the Board, in determining whether to approve the deviation request, will permit a company to adduce proof of systematic bias based upon its history.

Classification Rate Making Techniques

32. For purposes of both interim and ultimate rate making, and subject to the qualifications set out in recommendations 33 and 34, both the minimum bias technique and the greatest accuracy credibility technique (GAC) should be utilized in classification rate making.

33. The minimum bias technique should be used either alone or in conjunction with GAC; GAC should not be used on its own.

34. The use of GAC should be evaluated on a continuing basis, by comparing rates arrived at with and without GAC on the basis of actuarial judgment.

CHAPTER 6

1. The Board will adopt a uniform rating algorithm for calculating individual policy premiums.

2. In order to permit insurers to begin programming systems, a generalized formula for a uniform rating algorithm, as set out in Appendix E, is adopted at this juncture.

3. A technical committee, consisting of actuaries and systems persons and operating under the direction of Board Staff, will be formed to consider the adequacy and completeness of the generalized formula. The committee will report back to the Board by November 4, 1988. The generalized formula recommended by the committee will be considered, and parameterized, in Hearing No. 4.

CHAPTER 7

1. a) Subject to Recommendation 1(b), the Board will set ranges of rates, rather then specific rates, for classes of risk exposure.

   b) The Board will set a single rate for a class of risk exposure where it considers this to be advisable.

2. The determination of the option or options to be adopted by the Board in structuring the rate ranges, and of the width of the rate ranges, is referred to Hearing No. 4.

3. With respect to the issue of the width of the rate ranges,

   a) The Board will request that Mercer undertake a study of existing true price dispersion among Ontario automobile insurers.

   b) The rates charged by the Facility Association will be included in the study of existing true price dispersion.

   c) The results of this study, together with Mercer's written evidence setting out the considerations relevant to a determination of the width of the rate ranges (Exhibit 5.14), will be introduced as evidence in Hearing No. 4.

4. The question whether the Board should adopt a policy of setting rate ranges annually is referred to Hearing No. 4.

CHAPTER 8

1. Subject to recommendations 2, 3 and 4, the Board will use the deviation procedures recommended by Mercer as the basis of its information requirements.

2. The Board will entertain requests from individual insurers for exemptions from certain of the basic information requirements. Exemptions will be granted on a case-by-case basis, upon the insurer satisfying the Board that it is unable to provide the information or that the information is unnecessary in light of the type of deviation in question.

3. Where the Board determines that information additional to that suggested by the Mercer forms is necessary, it will require such additional information on a case-by-case basis.

4. While the Board finds that it has jurisdiction to require group information, the question of the utility and propriety of requiring such information is referred to Hearing No. 4.

CHAPTER 9

Timing of Establishment of Rates and Rate Ranges

1. The general rate making methodology should be used to determine industry-wide rates, including those of the Facility Association and non-standard insurers.

2. If necessary, the Board will use its authority under the Act to consider separately the position of the Facility Association and to approve rates that are appropriate to the Facility.

3. While no separate methodology is required for the establishment of rates for non-standard insurers, the Mercer methodology appears to provide some flexibility to the Board in accommodating the non-standard market.

4. To the extent that rates established in Hearing No. 4 are not adequate for the non-standard market, deviation procedures are available under the Act.

5. The Board makes no determination at this juncture whether a separate hearing should be held to deal specifically with the needs of the non-standard market.

Timing of Establishment of Rates and Rate Ranges

6. The timing of the establishment of rates and rate ranges is referred to Hearing No. 4.

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1. INTRODUCTION

1.1 The Ontario Automobile Insurance Board (the Board), created by the Ontario Automobile Insurance Board Act, 1988, S.O. 1988, c.18 (the Act), has as its primary mandate the setting of industry-wide automobile insurance rates or ranges of rates that are, in the opinion of the Board, just and reasonable and not excessive or inadequate.

1.2 The Board decided on its own motion to hold an industry-wide hearing (Industry-Wide Hearing) under section 20(5) of the Act, and divided it into four parts, as follows:

1. The hearing on the classification plan and data availability (File No. I-88-1A) (Hearing No. 1) commenced on August 10, 1988; a Decision was released dated August 30, 1988 and a Supplemental Decision is forthcoming;

2. The hearing on rate making methodology (File No. I-88-1B) (Hearing No. 2) commenced on August 22,

1988, adjourned on September 7, 1988 and is the subject of this Decision;

3. The hearing on profitability standards (File No. I-88-1C) (Hearing No. 3) commenced on August 22, 1988, and adjourned on September 16, 1988; the Decision is pending; and

4. The hearing on the proposed rates or ranges of rates (File No. I-88-1D) (Hearing No. 4) is to commence on November 28, 1988.

2. THE HEARING

2.1 The Notice of the Industry-Wide Hearing dated July 6, 1988 was served by the Board on insurers and published in 16 Ontario newspapers. The Notice set out the four parts of the Industry-Wide Hearing.

2.2 The Board also issued a procedural order on July 6, 1988 which set out procedures for the Industry-Wide Hearing (Procedural Order - 1).

2.3 A Pre-Hearing Conference for the Industry-Wide Hearing, held on July 27, 1988, was attended by a quorum of the Board. Parties and limited intervenors were invited to make submissions on matters of procedure for the Industry-Wide Hearing. A preliminary list of issues had been prepared by Board Staff. This list of issues was discussed at the Conference and issues were added on the recommendations of parties and limited intervenors. A second procedural order for File No. I-88-1B, setting out the issues for purposes of the Industry-Wide Hearing, was issued on July 28, 1988 (Procedural

Order - 2), together with similar procedural orders for Hearings Nos. 1 and 3.

2.4 The Notice, Procedural Order - 1, and Procedural Order - 2, for the hearing under File No. I-88-1B, have been included in Appendix A.

2.5 The Chairperson appointed a panel of four members of the Board to conduct Hearing No. 2 dealing with the rate making methodology.

2.6 The hearing under File No. I-88-1B commenced on August 22, 1988 and was adjourned on September 7, 1988. Argument was oral.

2.7 Lists of the parties who appeared, the limited intervenors and the witnesses are included in Appendix B.

2.8 A daily transcript was kept of the hearing. All exhibits and transcripts are available from the Board Secretary for public inspection at the office of the Board located at 5 Park Home Avenue, 4th Floor, North York, Ontario.

3. PRELIMINARY COMMENTS

3.1 The Board had before it rate making methodologies proposed by the consultants engaged by the Board pursuant to section 7(2) of the Act, William M. Mercer Limited (Mercer). In its Report (Exhibit 5.1), Mercer had recommended (i) a general rate making methodology intended for "ultimate" adoption by the Board once data sufficient for rate making had been gathered under the classification plan adopted by the Board in Hearing No. 1 (Board Class Plan); (ii) "interim" methodologies for use in the inaugural years of rate making, prior to sufficient Ontario data being available under the Board Class Plan; and (iii) interim procedures to be used by individual insurers applying for rate deviations pursuant to section 23 of the Act.

3.2 The issues considered by the Board are set out in Procedural Order - 2. Also raised during the course of the hearing were several additional issues, dealing with the applicability of the proposed rate making methodologies to the Facility Association and

non-standard insurers; a uniform rating algorithm; and the propriety of the explicit recognition by the rate making methodology of a contingency provision. These issues form the subject matter of this Decision.

3.3 Before turning to consider the substantive issues, the Board wishes to make a number of preliminary comments. The first concerns the extent to which adoption by the Board of certain methodologies for use in its own rate making process would require insurers to adopt similar methodologies. The assumption that insurers would have to employ the Board's methodologies appeared to underlie, at least initially, a number of objections to the effect that certain of the Mercer methodologies constitute a departure from Ontario practice.

3.4 The evidence of Ms. Bass, a witness for Mercer, in cross-examination by Mr. Brown, Counsel for State Farm (Transcript, at 437-45) and re-examination by Board Counsel, Mr. Armstrong (Transcript, at 426-31) established that the methodologies chosen by the Board would be for its own internal rate making purposes; there would be no obligation upon an

insurer to employ the same methodologies in arriving at a determination of the rate it wished to charge. If, using its internal methodologies, an insurer determined that it wished to charge a certain rate, and if that rate fell within the range of rates to be established by the Board (see Chapter 7), no explanation concerning the manner in which the chosen rate had been determined would be required. If, using its internal methodologies, an insurer determined that a rate was necessary that fell outside the Board-established rate range, it would be necessary to apply for a deviation. The deviation procedures proposed by Mercer (Chapter 8) would permit an insurer to use its own rate making methodologies in establishing the need for the rate requested, but would require justification of departures from the Board's methodologies.

3.5 While it is clear that an insurer would be under no obligation to adopt the methodologies selected by the Board, insurers might be subject to indirect pressures to change internal methodologies. In the words of Ms. Bass (Transcript, at 439), "It will probably affect every insurance company in the way they regard their business because it is different

from the way they regard their business now vis-a-vis the price charged." Mr. Acton, of Canada Life Casualty, stated as follows (Transcript, at 672):

> I think [with respect to] the rate-setting used by the Board, [the industry] can use just about anything they want to use. People in the industry, the various industry organizations, will have a lot more confidence in it if it corresponds to how they think it should be done, but I would say it doesn't much matter how the Board sets these rates. I would say that there will be a tendency for companies to more or less follow that process just because that will become known as the 'Ontario process'.

3.6 Two further points that deserve emphasis at this juncture arise out of the closing submissions of Counsel for State Farm and Counsel for the Insurance Bureau of Canada (IBC), Mr. Finkelstein. First, Mr. Brown, referring to the short time frame within which insurers will be required to implement a new classification plan and Board-set rates, and the dislocation that will inevitably be experienced, recommended (Transcript, at 1358):

> If ... you come to the conclusion that one of the Mercer or Bass proposals is far superior, then use it, but my suggestion is if, at the end of the day, you find them equally balanced, use the traditional principle.

Mr. Finkelstein recommended as follows (Transcript, at 1324):

> ... and so my general submission is going to be that when you choose a methodology now, you should not do so by choosing any specific and detailed formulae; you should establish an interim set of principles, you should establish that the base rates are going to be established by pure premium or loss ratio, for example; that you are going to use the layered approach or the data segmentation approach; that you are going to use a balancing margin or you are not, but you shouldn't adopt any kind of detailed formulae and you shouldn't adopt any kind of procedure that is going to be cast in stone.

3.7 With respect to the position advanced by Mr. Brown, the Board, in making its decisions concerning competing methodologies, has borne in mind the difficulties facing the industry. In cases where the Mercer methodology has appeared to the Board to be superior, the Board has adopted the superior methodology. Where, however, the advantages of two competing approaches appear equally balanced, the Board has opted in favour of the approach currently in use in Ontario.

3.8 The Board also accepts the validity of the position urged by Mr. Finkelstein. The need for flexibility

and for the application of judgment was acknowledged by Mercer in evidence. Ms. Bass, for example, made the following comments, which deserve to be quoted at some length (Transcript, at 44-47):

> We have noted from submissions of several interested parties that there is some concern on their part that these methods become ensconced prior to review of the data and prior to full knowledge of the classification plan. We recognize this and have, on some occasions, selected values to be used in making certain adjustments. However, these are not to be considered as immovable recommendations but, rather, as starting points from which further modification can be made, if appropriate.
>
> Data-specific actuarial rate-making methodologies are not immutable; only the actuarial principles underlying them are. Therefore, this document should really be regarded as a living document, forming the basis from which to begin but which will probably change somewhat over time.
>
> When rates are actually made, each modification to the general model must be fully disclosed, supported, documented during the process of presenting the proposed rates. In this way, the Board and all interested parties can again review the methodology and see that it applies properly to the data at hand.
>
> Every year, when rates are again made for the coming year, the prior year's process should be tested against the actuarial results in order to determine whether or not the process was appropriate. If it's determined that some part is not operating as well as it could, it should probably be modified. This means that each year at the

> time of rate-making, the modifications must be fully disclosed, supported, and documented.
>
> ....
>
> It's important to understand that this method does allow for sufficient application of judgment.
>
> ....
>
> It's necessary, in all aspects of rate-making, that a human mind touch it sometime in the process, many times in the process, but I would also like to say that 'judgment' should not be confused with the word 'arbitrariness'. Whenever a mechanical process is altered through judgment, that judgment should be based on some fact or observation, and then the process should be modified with support provided for the modification. Any time judgment is used, the extent of the judgment and its likely effects should again be disclosed, supported, and documented.

The Board agrees with the approach outlined above and adopts it with respect to the methodologies to be approved pursuant to this Decision.

4. Interim Rate Making

4.1 This Chapter deals with certain general issues included in Procedural Order - 2 for determination as part of this hearing. These relate to the implications for the rate making process of the current unavailability of Ontario data upon which to base inaugural rates and of the short time frame within which such rates must be established. A related question concerns the propriety of the use of data from foreign jurisdictions in the setting of rates. In his closing submission, Board Counsel suggested that these matters had been the subject of neither dispute nor substantial discussion (Transcript, at 1283-84). The Board agrees with this observation and, accordingly, will comment only briefly and in a general manner.

4.2 The evidence of Mercer (Exhibit 5.1, at 66) was to the effect that much of the data required for the setting of rates, and in particular the establishment of classification differentials in accordance with the Board Class Plan, is currently not recorded in

the Superintendent's Statistical Plan (Stat Plan) and will have to be collected under the new statistical plan adopted by the Board in Hearing No. 1 (Board Statistical Plan). It is clear that the feasibility of interim methodologies will depend largely upon the availability of data. Moreover, the availability of data will have to be monitored on an ongoing basis in order to determine when progress can be made towards the ultimate methodologies adopted by the Board.

4.3 Mercer stated that, because of the lack of available and accessible industry-wide Ontario data, it will be necessary to rely in the inaugural years upon other, collateral sources of data in the setting of rates. Mercer suggested that, in establishing classification differentials, the Board could, through examination of the rate manuals of Ontario insurers, or a selection of insurers, adopt classification differentials currently in use in the Province. In addition, the Board could elicit claim data from a selected group of insurers through special calls. The Board could also look to data from other jurisdictions for guidance as to appropriate classification differentials pending the availability of Ontario data.

4.4 In light of the severe data constraints to which it is subject, and subject to the qualifications that follow, the Board does not wish to preclude recourse to collateral sources of information, including data from foreign jurisdictions. Reliance will be placed, however, on Ontario data to as great an extent as is possible. Moreover, as recommended by Mercer, the use of collateral data will be "fully disclosed, supported and documented" at the time rates are proposed and will be subject to testing in Hearing No. 4 and at industry-wide rate hearings in subsequent years.

4.5 The implications for the rate making methodologies of the very restricted time frame within which inaugural rates must be set will become apparent in subsequent portions of this Decision. As will be seen in Chapter 5, the adoption of certain of the "ultimate" methodologies recommended will have to be postponed in favour of currently feasible, but less desirable, alternatives. Moreover, it will be necessary to adopt interim methodologies (the expense constant, for example) without the advantage of study that is considered to be desirable. Finally, as indicated in Chapter 3 of this Decision, the Board has been

mindful of the difficulties faced by insurers in effecting significant changes to current practice within a short time frame; accordingly, in deciding between competing methodologies where the relative advantages of each are evenly balanced, the Board has opted in favour of the methodology currently in use in the Province.

Conclusions and Recommendations

4.6 It is therefore determined that:

1. For purposes of rate making in the interim period, prior to data being available under the Board Statistical Plan, the Board will have recourse to collateral sources of information, including data from foreign jurisdictions.

2. Reliance will be placed on Ontario data to the extent possible. Moreover, the use of collateral data will be fully disclosed, supported and documented at the time rates are proposed, and will be subject to testing in Hearing No. 4 and at industry-wide rate hearings in subsequent years.

5. GENERAL RATE MAKING METHODOLOGIES

Introduction

5.1 The general rate making model proposed by Mercer for ultimate adoption by the Board comprised two parts: (1) the methodologies for determining the average province-wide premium for Ontario by major automobile line and coverage; and (2) the methodologies to distribute this premium by determining appropriate rating differentials by classification. In this Chapter, the Board considers both parts of the proposed rate making model.

5.2 The Mercer Report recommended (Exhibit 5.1, at 6) that the average province-wide premium for automobile insurance be determined separately for each major line and each coverage, as set out below:

Major Lines

Personal Vehicles
- Private Passenger Automobiles
- Motorcycles

Trailers and Camper Units
Snow Vehicles
Off-Road Vehicles
Historic Vehicles

Commercial Vehicles

Public Vehicles
Taxis and Limousines
Other Public Vehicles

Coverages

Third Party Liability
Comprehensive
Specified Perils
All Perils
Collision
Accident Benefits

5.3 The Report adopted a "pure premium" approach, based on the accident year as the underlying historical unit, and defined "pure premium" as accident year total claim dollars divided by calendar year total earned units of exposure. The Report considered separately the two major costs underlying the premium charge: (1) the expected costs for claim and claim adjustment expenses; and (2) the expected costs associated with operating an insurance company. The expected costs for operating expenses were further divided into two separate types of expenses: (a) those varying on a per policy basis; and (b) those varying according to premium. The Report first

developed rate making procedures for the pure premium of each coverage within a major line, and then outlined expense procedures for the major line as a whole.

5.4 The formula (Exhibit 1-D to the Mercer Report) representing the proposed methodology for estimating the province-wide pure premium for private passenger vehicles for all of the coverages listed in paragraph 5.2 is set out as Appendix C to this Decision. Appendix D to this Decision is a "Matrix of Rate Making Methodologies Recommended in the Mercer Rate Making Study", prepared by Mercer and filed during the hearing as Exhibit 5.10. The Matrix sets out all the recommended adjustments to the various elements of the proposed rate making methodology by type of coverage.

5.5 As indicated, the second part of the general model proposed by Mercer comprised methodologies to distribute the average province-wide pure premium by classification (classification rate making). While, ideally, pure premium would be estimated directly for each cell, this was obviously impractical as the Board Class Plan includes many cells for which there

will be little or no data. Accordingly, Mercer put forward two techniques or methodologies designed to be "capable of producing a pure premium for each cell that is as close to the true underlying claim experience as possible while at the same time considering the practical implications of (possible) limited data credibility" (Exhibit 5.1, at 50). The two techniques were the minimum bias and greatest accuracy credibility techniques.

5.6 The Board accepts the submission of Board Counsel (Transcript, at 1296) that the evidence established that the general methodology proposed by Mercer is consistent with the Statement of Principles Regarding Property and Casualty Insurance Ratemaking (Exhibit 5.8) adopted by the Casualty Actuarial Society, and that no party proposed a comprehensive alternative methodology to the Mercer methodology. Rather, the parties suggested a number of changes or improvements to specific aspects of the general methodology. Accordingly, it is proposed to deal in turn with each of the proposed amendments. Except to the extent that the general methodology is amended by the

decisions of the Board in respect of the recommended improvements, the Board adopts the general methodology as contained in the Mercer Report.

Average Province-Wide Pure Premium

(a) Pure Premium vs. Loss Ratio

5.7 Much of the evidence concerned the relative advantages and disadvantages of the "pure premium" approach adopted by Mercer and the loss ratio approach favoured by a majority of the parties. As indicated, the pure premium method estimates the average province-wide premium directly by dividing accident year total claim dollars by calendar year total earned units of exposure, the latter being all cars insured for one year. The loss ratio method, on the other hand, estimates the premium as a percentage change from the prevailing average premium. That is, the premium is calculated by applying to the current rates an adjustment factor -- the ratio of the projected loss ratio to the permissible loss ratio (Exhibit 5.1, at 6-7; and Exhibit 12.1, at 4-10).

5.8 Both methods were acknowledged to be actuarially sound and widely recognized methods upon which to base rates, although Mr. Miller, a witness for the IBC, suggested that the loss ratio method was more common in private passenger automobile rate making (Transcript, at 491-92).

5.9 A major feature of the pure premium approach, as established by the evidence, is that, unlike the loss ratio method, it does not require an adjustment of past premiums of the experience period to the current rate level. Since Ontario has no uniform system of rates, this represents a major advantage for the inaugural rate making process over the loss ratio method, which, because it produces rate changes, requires an established rate and premium history. The Mercer Report indicated (at 7) that, thereafter, the pure premium method would also be less cumbersome as it would avoid the necessity of adjusting all premiums (which could vary within a range or by virtue of deviations) to a common level. Mr. Miller's evidence (Exhibit 12.1, at 11; and Transcript, at 489-90) suggested, however, that this adjustment would not present major difficulties.

5.10 A disadvantage of the pure premium approach that was raised in evidence was that it is subject to bias by reason of differences in the distribution of business by class. It was suggested that the process of checking data and eliminating this bias could prove to be cumbersome (Miller, Transcript, at 490-91, 755-57; and Lehmann, Transcript, at 855-56). Ms. Bass, testifying for Mercer, acknowledged this potential for bias, but stated that the problem is less significant where rates are established on a province-wide basis than where company-specific rates are established using the pure premium method. With the establishment of province-wide rates, shifts in the distribution of insureds within the Province are less likely than shifts in a company's book of business due to migration of insureds from company to company (Transcript, at 1272-73).

5.11 It was suggested on behalf of the IBC by Mr. Miller, and on behalf of State Farm by Mr. Lehmann, that the loss ratio method helps eliminate bias caused by differences in the distribution of business (Miller, Transcript, at 756-57; Lehmann, Transcript, at 855). Ms. Bass agreed, but suggested that both methods are subject to bias and that, to the extent that the

differentials employed in the loss ratio method are not correct, that method will be less successful in eliminating bias (Transcript, at 1273-74).

Board Decision

5.12 The Board has decided that the pure premium method should be adopted for the initial rate making process. As there is no current set of rates to which the loss ratio method could be easily applied, it is in the Board's view preferable to utilize claims and exposure data, which is readily available, and to arrive at the average province-wide premium by way of the pure premium method.

5.13 The implications of adopting the loss ratio method in the long term were not, in the Board's opinion, adequately explored during the course of the Hearing. For example, it was noted by Ms. Bass (Transcript, at 236) that "it is extremely difficult to establish an expense constant [a concept that was tested in evidence and that is adopted by the Board in paragraph 5.67] within the frame work of a loss ratio method because the loss ratio method depends upon extending premiums, not pure premiums; that is,

premiums including expenses at present rates ...". No general model was developed and tested that would permit the Board to choose the loss ratio method over the pure premium method.

5.14 At the same time, the Board does not wish to preclude future use of the loss ratio method. It is the method currently used by a number of Ontario insurers and, with the exception of Progressive Casualty, which indicated that it had no preference, its adoption in the long term was supported by all parties representing the industry. The Board accepts the utility of the loss ratio method in eliminating bias due to shifts in the distribution of business, although it notes that such shifts may well be less likely under a system of province-wide rates. Accordingly the Board will use the pure premium method, but will study the loss ratio method further with a view to assessing its desirability as the method to be employed in the long term.

(b) Adjustment for Semi-Annual Policies

5.15 The Mercer rate making methodology assumes that policies are annual and recognizes that the annual

premium developed pursuant to the methodology will require adjustment in order to calculate an appropriate premium for semi-annual policies (Exhibit 5.1, at 7-8). The Mercer Report recommended against a simple adjustment factor of 50 percent on the ground that insurers writing six month policies will realize a rate level change three months earlier, on average, than insurers writing annual policies, and accordingly will collect more earned premium in a given calendar year (assuming most rate level changes to be increases).

5.16 It was suggested (Lehmann, Transcript, at 854) that this advantage is offset by the fact that insurers writing semi-annual policies receive only six months rather than twelve months premium in advance and, therefore, earn less investment income on premiums. Mr. Miller noted in pre-filed evidence, however, that annual policies are often sold on a deferred payment plan, thereby reducing investment income (Exhibit 12.1, at 32). Ms. Bass acknowledged the relevance of these considerations, and suggested (Transcript, at 65-66) that further study is required before an appropriate adjustment factor can be determined.

Board Decision

5.17 The Board considers it unlikely that insurers are not reflecting the time value of money in their decisions concerning prices charged for various policy terms. Nevertheless, the Board finds that there is insufficient information concerning the cash flow implications of writing semi-annual, as opposed to annual, policies to establish a factor in respect of semi-annual policies at anything other than 50 percent for the inaugural rate making process. Board Staff will, however, devise a questionnaire, to be sent to insurers, which will determine current industry practices with respect to policy terms, billing procedures and receipt of premiums. The results of this survey will be used to determine an appropriate factor for semi-annual policies in the future, and, like any newly proposed aspect of rate making methodologies, will be subject to testing at a future industry-wide rate hearing.

(c) Data Segmentation

5.18 The Mercer Report recommended (Exhibit 5.1, at 12) that expected future claim costs be estimated

separately for each limit of liability. The Report explained that this approach is a departure from traditional rate making practices, which generally analyze the basic limits claims from all policies (regardless of policy limit) and then relate the costs arising from increased limits to these basic costs. The latter, more traditional, approach is referred to as the "layering approach", whereas the Mercer approach is referred to as the "segmented approach".

5.19 The Mercer Report gave two reasons to support the segmented approach:

(i) that distinctly different kinds of drivers (in terms of claims potential) tend to purchase higher limits from those purchasing lower limits, and

(ii) that insurer claims settlement practices vary considerably by policy limit.

In addition, the Mercer Report observed that combining basic limits claims from high limit policies with those from lower limit policies can compromise the homogeneity of the data with no offsetting advantage. The Report also recommended that the segmented approach should be used to

estimate future claims costs by deductible for the physical damage coverages (Exhibit 5.1, at 26).

5.20 The industry objected to any change from the traditional method of layering to the segmented approach, notwithstanding that Mr. Miller stated on behalf of the IBC that both methods were actuarially sound. The industry highlighted the fact that the segmented approach could result in rate reversals--that is, in the resulting premium for high limit policies (for example, $1 million) being less than the resulting premium for lower limit policies (for example, $500,000). Mercer recognized this possibility in its Report and Ms. Bass testified that, in the event of such a result, additional "smoothing" would be necessary to prevent a distribution shift -- that is, to avoid the phenomenon of persons with a $500,000 limit purchasing $1 million limit policies (Transcript, at 81-82). Ms. Bass stated that it might be necessary to resort to the layering approach to resolve anomalies produced by the segmentation approach. Mr. Miller questioned the utility of adopting the data segmentation approach if resort to layering was going to be necessary in any event.

5.21 In support of the segmented approach, Mercer observed that it permits recognition of underlying differences in frequency of claims by policy limit, which is not possible under the layering approach. Ms. Bass also stated that the segmented approach makes it easier to measure the impact of social inflation, that is, changing court awards.

5.22 In further support of the segmented approach, Mercer observed that the character of the limits is very different in Ontario from the character of limits in the United States, where the traditional approach developed. In the United States, insureds tend to purchase a multitude of lower limits, such as $20,000, $30,000 and $50,000, whereas in Ontario there is a heavy concentration in the $500,000 and $1 million policy limit categories. In fact, Mr. Christie of the Dominion of Canada Group stated (Exhibit 5.5) that

> According to IBC data, 39.54% of BI/PD premium is written at $500,000 limits and 55.43% at $1,000,000 limits. This leaves only 5% to be written at lower limits.

Board Decision

5.23 The Board adopts the Mercer recommendation that expected future claim costs be estimated separately for each limit of liability and that a similar approach be used for physical damage coverages by deductible amount. This approach is adopted for purposes of both interim and ultimate rate making. The Board emphasizes, however, that rates should be established sufficient to avoid any distribution shift.

5.24 In arriving at its conclusions, the Board has been influenced by a number of factors. First, it has given consideration to the fact that the segmented approach is viable in Ontario because of the high concentration of policies in a small number of policy limit categories. Secondly, the Board recognizes that the segmented approach avoids the danger of underlying characteristics being masked, as could be the case with the layering approach. The Board is also of the view that the segmented approach allows more meaningful trend analysis.

(d) Number of Years of Historical Claims Data

5.25 The Mercer Report recommended (Exhibit 5.1, at 14) that the historical experience underlying the average province-wide rate making method should be the most recent accident year of claims data, valued at fifteen months. Ms. Bass testified that a one year period had been chosen because this period provides sufficient aggregate data to be considered completely credible, and because the more recent the experience period chosen, the more "responsive" the data is likely to be to the current situation (Transcript, at 84).

5.26 Several parties suggested in pre-filed evidence that the best experience period might be two years or longer, in order to smooth possible distortions in the most recent year's data caused by unusual weather conditions. Ms. Bass testified that mechanically adding an additional year's data would not necessarily solve distortions caused by aberrant weather conditions, which can extend beyond a one year period. She stated, however (Transcript, at 85), that the use of the one year period was subject to inspection of the data for distortions and to the

application of judgment, and that she would use data from prior years if aberrations were apparent in the most recent experience period. Mr. Miller testified for the IBC that, in light of Ms. Bass' testimony, he was satisfied that the Mercer recommendation was appropriate (Transcript, at 467).

Board Decision

5.27 The Board agrees with the Mercer recommendation, as expanded by the testimony of Ms. Bass, and accordingly has determined that the relevant experience period should be the most recent accident year of claims data, valued at 15 months. Actuarial judgment should be brought to bear on this data and it should be supplemented, where appropriate, with data from additional years of claims experience to smooth for aberrant conditions.

(e) Claim Development Factor

5.28 At the conclusion of the historical experience base period, not all of the claims and allocated adjustment expenses will have been reported, reserved or paid. The rate making process, however,

anticipates that such amounts will ultimately be paid. A method of projecting unreported, unpaid and unreserved losses to their ultimate values is through age-to-age claim development factors, derived from several years of historical pure premium development. The Mercer Report recommended that, "for each of the most recent eight accident years, the unadjusted pure premium be valued at subsequent 12 month intervals to provide a claim development triangle from which to select appropriate age-to-age loss development factors" (Exhibit 5.1, at 15). An illustration of the recommended procedure was set out as Exhibit 2-A to the Mercer Report.

5.29 Evidence prepared by Mr. Miller on behalf of the IBC (Exhibit 12.1, at 17) suggested that the historical data should be developed beyond the 8 year period and that, in addition to age-to-age development based on reported incurred claims, other methods, such as a claims "counts and averages" approach, might be appropriate in analyzing loss development. Such an approach involves separate analysis of claim frequencies and average claim size. Ms. Bass agreed (Transcript, at 103-04) that this type of analysis might be useful and, in light of Ms. Bass' testimony,

Mr. Miller indicated agreement with the Mercer approach in this respect (Transcript, at 468).

5.30 There was disagreement with the Mercer recommendation that liability claim development factors should be based on a combination of bodily injury and property damage claim loss data (Exhibit 12.1, at 16). The advisability of combining these coverages was questioned seriously and a number of significant observations were highlighted:

(i) The two coverages are coded separately and hence can be aggregated separately.

(ii) There is no reason to combine the coverages when they can be studied separately.

(iii) The two coverages have quite different characteristics: the average claim size is significantly different, the average claim frequencies are significantly different, and the patterns and movement over time are significantly different.

(iv) Combining the two masks some of the changes in costs because the cost trends are quite different for the two coverages. The Report of Inquiry into Motor Vehicle Accident Compensation in Ontario (Osborne Report) indicated (Vol. II, at 141) that bodily injury claim costs are increasing at about double the rate of property damage claim costs.

Accordingly, it was argued that the claim development factor should be analyzed separately for the two components.

5.31 Ms. Bass indicated (Transcript, at 105-06) that the reasons for combining the two coverages for purposes of liability loss development factors were that (i) they are sold as a package, and (ii) there could be problems in coding. However, Ms. Bass agreed that, if the coding were reliable, the question of treating the coverages separately would be worth investigating. Parties disputed the inaccuracy of the coding. In closing argument for the IBC, Mr. Finkelstein urged that the fact that companies are currently analyzing the data separately, and

therefore relying on the accuracy of coding as between bodily injury and property damage, constitutes the best evidence that the actuarial advantages of separate analysis outweigh the risk of any coding inaccuracy (Transcript, at 1333).

Board Decision

5.32 The Board recognizes the strong reasons advanced by the industry in favour of separate analysis of bodily injury and property damage. Accordingly, the Board has determined that the loss development factor should be analyzed separately for the bodily injury and property damage components of third party liability coverage. However, the Board also recognizes the concerns expressed by Mercer that the coding may not be wholly reliable. Actuarial judgment will be necessary to determine whether or not this is the case. If, in the interim period, coding difficulties emerge, the combined data should be used to adjust the results. Subject to these comments, the Board adopts the Mercer methodology, as augmented by Ms. Bass' testimony concerning the use of claims "counts and averages".

(f) Claims Costs Trend

(i) Methodology

5.33 An objective of rate making is to estimate the expected claim costs arising from the policies that will be issued during the year for which the rates will be in effect. Historical claims reflect costs of a previous claim period and hence must be adjusted to reflect cost levels expected to prevail during the year for which the newly established rates will be in effect.

5.34 The Mercer Report suggested (Exhibit 5.1, at 17) the following bases for adjusting the historical experience to current levels using trend procedures:

(i) the trend of historical pure premium itself;

(ii) the trend of historical claim frequency and historical severity determined separately and then combined; and

(iii) the trend of some external index related to the cost of automobile insurance.

The Report recommended that a trend estimation be used based on a combination of these three bases, perhaps weighted 50% - 30% - 20% respectively.

5.35 The evidence presented by the industry gave strong support to the use of separate claims frequency and severity trends. It was emphasized that the use of the pure premium trend can mask some emerging differences between frequency experience and severity experience. Furthermore, the industry questioned the necessity and advisability of recognizing any external factor in the trending formula.

5.36 The weighting of the factors (that is, 50% - 30%-20%) came under direct criticism. Without exception, the parties who addressed the issue expressed the view that much more weight should be given to the frequency/severity component and less (maybe 0%) to the external factor (Lehmann, Transcript, at 852). Mr. Miller, on behalf of the IBC, recommended that the weighting of the factors be decided in Hearing No. 4 (Transcript, at 768-69).

5.37 In testimony, as well as in the Report, Mercer emphasized that the weighting was not cast in stone and would require further consideration. Ms. Bass also stated that, whatever method is adopted, it should be applied as consistently as possible over future years (Transcript, at 112).

Board Decision

5.39 The Board adopts the Mercer recommendation that claims cost trending procedures be based on a combination of (i) the trend of historical pure premium itself; (ii) the trend of historical claim frequency and historical severity determined separately and then combined; and (iii) the trend of some external index related to the cost of automobile insurance.

5.40 In adopting this recommendation, the Board does not adopt any specific weighting, but rather defers the decision as to the appropriate weighting to be dealt with in Hearing No. 4. The Board is, however, sympathetic to the industry view that the external factor is substantially less significant than the other two factors.

(ii) Separate Trend Factors for Bodily Injury and Property Damage

5.41 The Mercer Report recommended that claims cost trend factors be based on a combination of bodily injury and property damage claim loss data. The evidence adduced in respect of this recommendation was similar to that presented in respect of the claim development factor (paragraph 5.30, 5.31).

Board Decision

5.42 For reasons similar to those expressed in connection with the claim development factor, the Board accepts the recommendation of the industry that, for purposes of claims cost trending, separate factors should be developed for bodily injury and property damage. If, in the interim period, it is determined, on the basis of actuarial judgment, that the coding is unreliable, the two factors should be combined and the combined data used to adjust the results.

(iii) Current Costing

5.43 Mercer's recommended method of applying a selected

trend factor is based on a projection of past losses from the mid-point of the experience period to twelve months beyond the anticipated effective date of the rate change. This has been the traditional approach.

5.44 Mr. Miller, testifying for the IBC, explained that it is becoming more common to use a current costing method, which applies one trend factor from the mid-point of the experience period to the end of the past experience period and then applies a different trend factor from the end of the experience period to the end of the year in which the new rates will be applied. It was also observed that Mercer had included this current costing method in its recommendations in respect of deviation filings (Exhibit 12.1, at 20).

5.45 Ms. Bass acknowledged that, where more than one year of historical claims data is used, the current costing approach would be more appropriate. She stated (Transcript, at 116):

> That [the current costing trend factor], could be of great value, especially if there were a second year or a third year added on to the procedure ....

Board Decision

5.46 The Board agrees with the industry and with Mercer that, where more than one year of data is used, trend factors using the current costing method should be adopted.

(iv) Fifteen Months Known or Ultimate Valuation.

5.47 The Mercer Report recommended that trending be based on the trend of historical pure premium for the most recent six accident years valued at 15 months. As an alternative, Mercer suggested that the trending could be based on ultimately developed loss costs (Exhibit 5.1, at 18).

5.48 In evidence, both written and oral, parties indicated some preference for the ultimate basis. Mercer did not express a strong preference for either method, but expressed the view that ultimately developed loss costs involve a second set of assumptions, which might or might not prove appropriate (Bass, Transcript, at 118). No evidence was provided to establish that trending on projected ultimate values

would be any more reliable than trending based on 15 month known loss values.

Board Decision

5.49 The Board recognizes that both the 15 month known loss method and the ultimate loss method involve assumptions that may not produce identical results, but considers that, on the strength of the evidence presented, neither method is more dependable than the other. The Board chooses to avoid the double set of assumptions involved in the ultimate method and therefore adopts the Mercer recommendation that the known loss costs based on an experience period of 15 months be used for purposes of trending.

(v) Use of Quarterly Trend on Rolling 12 Month Basis

5.50 As indicated, the Mercer Report proposed that trending be based on the most recent six accident years valued at 15 months. The Report also indicated that it was common to rely on accident-quarter experience but pointed out that the effect of weather or driving conditions can result in seasonal

aberrations so that annual points, while fewer in number, may be more reliable (Exhibit 5.1, at 18).

5.51 State Farm pointed out (Exhibit 10.1, at 2) that seasonal aberrations in quarterly data can be eliminated by the use of 12 month data taken on a quarterly moving average basis. In this way the advantages of annual data (eliminating seasonal aberrations) and more recent experience (the most recent quarter) would both be achieved.

Board Decision

5.52 The approach suggested by State Farm would accomplish two purposes. First, it could remove the aberration that could result from quarterly periods; and secondly, it would make use of the most recent data available. The Board questions, however, whether the data necessary to use quarterly trending on a rolling 12 month basis is immediately available. Accordingly, for the ultimate methodology, the Board adopts the State Farm recommendation that trends be based on experience developed at quarterly intervals using data from the most recent four quarters. For the interim period, the Board adopts the Mercer

recommendation that trending be based on the most recent six accident years valued at 15 months.

(g) Allocated Loss Adjustment Expense

5.53 Mercer recommended that, in arriving at the unadjusted pure premium, the allocated loss adjustment expense should be included for liability coverage but excluded for the physical damage coverages (Exhibit 5.1, at 13, 26). Evidence filed on behalf of the IBC (Exhibit 12.1, at 18) stated that industry data "is currently compiled with the allocated loss adjustment expense included in the loss experience for all coverages", and recommended continuation of the current approach. Ms. Bass testified (Transcript, at 86) that, even if the data is compiled in this manner, it is often difficult to associate accurately the allocated amount with the physical damage claim, and that, for this reason and because the amounts in question are small, they should be included with other, unallocated adjustment expenses.

Board Decision

5.54 The Board accepts the position of the IBC and has determined that the allocated loss adjustment expense should be included in the loss experience for all coverages.

(h) Excess Claims Procedure

5.55 In respect of comprehensive losses, Mercer recommended an excess claims procedure for smoothing the effects of catastrophic weather-related claims. The Mercer Report described the proposed excess claims procedure as follows (Exhibit 5.1, at 28-29):

> We recommend defining excess claims as those occurring in any month where the aggregate claims (as valued three months later) are greater than twice the average monthly non-excess claims of the three prior months, valued as of the same point.
>
> The non-excess claims, then, are those limited to the prior three-month average; all aggregate claims over this amount are considered excess. By first summing the non-excess claims, a non-excess pure premium can be obtained. Then a twenty year average of excess claims relative to non-excess claims can be estimated by first adjusting each accident year's excess claims to the current cost level of the experience period through application of the annual change in an appropriate component of the CPI. This twenty year

> total of adjusted excess claims can then be divided by 20 to find the average annual excess claim dollars. This, in turn, is divided by the non-excess claims of the current accident year to obtain the excess claims factor.

5.56 Evidence prepared by Mr. Miller and filed on behalf of the IBC suggested (Exhibit 12.1, at 31) that the Mercer approach,

> ... largely ignores the seasonality inherent in comprehensive losses. For example, theft losses tend to rise in the summer months. Under the Mercer approach a catastrophic weather loss would be partially hidden if it occurred after 2 or 3 months of increased theft losses.

A similar point was made by Mr. Lehmann, testifying on behalf of State Farm (Transcript, at 908). Both Mr. Miller and Mr. Lehmann expressed the view that reliance should be placed not on a 3 month period, but rather on a longer, 12 month loss period. While conceding that an excess claims procedure such as that recommended by Mercer had some merit, the IBC preferred to rely on an average wind and water factor over twenty years: if, in any year, the wind and water losses exceeded the long-term average, the excess would be termed an excess wind and water loss (Exhibit 12.1, at 31). State Farm recommended the

use of "existing catastrophe coding" (Exhibit 10.1, at 2). Mr. Lehmann testified that he would identify a catastrophe on the basis of 12 month losses, and would look at catastrophes over a 20 year period in order to obtain average annual excess claim or catastrophe dollars (Transcript, at 908-11).

5.57 The essential differences between the Mercer approach and that of the IBC and State Farm relate (1) to the use of a moving 3 month non-catastrophe period as opposed to a 12 month period to determine whether an excess claim or catastrophe has occurred, and (2) the reliance, in the case of the Mercer approach, on accident month statistics and, in the case of the IBC and State Farm approaches, on coding by cause of loss.

5.58 With respect to the first difference identified above, Ms. Bass' evidence was to the effect that, unlike the situation in some U.S. jurisdictions such as Texas, catastrophes in Ontario are generally relatively small. Accordingly, looking at the excess claims on a monthly basis and comparing the experience of the month to that of 3 previous non-catastrophe months would give a more accurate picture

than the proposed alternative. In response to questions posed by Board Counsel in cross-examination concerning the possible inaccuracy of cause of loss coding, Mr. Miller stated that, in his view, such coding had been reasonably accurate in Ontario over the past twenty years (Transcript, at 808-09). While Mr. Lehmann stated that State Farm's coding is accurate, he conceded a potential for coding problems (Transcript, at 911-12).

5.59 With respect to interim procedures to deal with excess claims or catastrophes, the Mercer Report stated as follows (Exhibit 5.1, at 71):

> The immediate use of an excess claims smoothing procedure such as the one outlined in Section 1 would require the reconstruction of a long claim history and is impractical for interim rate-making methodologies. Instead, a judgment will need to be made concerning the nature of the accident year claims, as to whether they contain catastrophe claims or not. After adjustment to remove catastrophe claims, if there are determined to be any, the current catastrophe factor employed by the IAO [Insurers' Advisory Organization] could probably serve as a reasonable alternative in the interim. The effect of catastrophes in Ontario is not great, so any potential error introduced by using the IAO factor will be minimal.

Board Decision

5.60 The Board notes that it will be a number of years before data is available under the Mercer approach. Moreover, while the evidence indicated that some insurance companies currently code wind and water and catastrophe losses, a perusal of the Stat Plan indicates that such information is not reported under the Stat Plan and is accordingly unavailable to the Board on an industry-wide basis. The Board has therefore concluded, as suggested by Mercer, that, in the interim period, actuarial judgment should be applied to accident year data to determine whether it contains catastrophe claims. The current IAO catastrophe factor of 2 percent should then be applied to the data as adjusted.

5.61 With respect to ultimate rate making, the Board sees utility in both major approaches placed before it. In light of the controversy, which the Board considers to be unresolved by the evidence, concerning the relative merits of the two approaches with respect to smoothing for seasonality, the Board considers that the two methods could usefully be used in conjunction one with the other and judgment

applied to the results. It may well be that, over the years, one method will prove more credible and will be adopted by the Board as the preferred method. In the meantime, wind and water losses should be required to be coded by the industry and reported under the Board Statistical Plan.

(i) Expenses

5.62 As indicated, the Mercer Report divided operating (that is non-claims-related) expenses of an insurer into two types: (1) those that vary directly with premium, such as commissions, premium taxes and, at present, charges under the Ontario Hospital Insurance Plan (OHIP) bulk subrogation agreement (premium variable expenses); and (2) those expenses, such as salaries, postage, and occupancy cost, that, although historically treated as varying directly with premium, do not necessarily vary in this manner. Mercer considered the latter type of expense to vary primarily according to the issuance and servicing of policies, and recommended that operating expense be treated as an "expense constant" on a per policy basis and added to the total policy premium following determination of the pure premium charges for each

coverage and prior to inclusion of premium-variable expenses (Exhibit 5.1, at 32-34).

(i) Expense Constant

5.63 While there was no disagreement in principle with the concept of an expense constant, there was disagreement with Mercer's contention that most costs are incurred on a per policy basis. Parties argued that the expense constant should be fixed on the basis of exposure or on a combined exposure/ coverage basis.

5.64 The evidence established that some operating expenses are incurred on a per policy basis; others, in particular, mid-term changes, are incurred per exposure; and yet others vary according to coverage (Lehmann, Transcript, at 873-80). The evidence failed to establish with any precision what proportion of expenses could be attributed to each item, although it would appear that a substantial percentage varies according to policy.

5.65 Some parties argued that, because certain insurers offer multi-car discounts while others issue a policy

for each exposure, imposition of a policy constant could lead to unfairness to particular insureds, who would be required to pay more if their vehicles were insured under separate policies. It was also suggested by Mr. Acton of Canada Life Casualty (Transcript, at 601-02) that a policy constant approach could lead to a change in consumer behaviour, as insureds would seek out insurers offering multi-car discounts, thereby making the determination of an appropriate policy charge difficult. Mr. Lehmann stated on behalf of State Farm that, as a matter of philosophy, those who purchase full coverage policies should bear a larger portion of an insurer's operating expenses than those who purchase minimum coverage (Transcript, at 845).

5.66 It was clear from the evidence that the policy writing and rating systems currently in use by insurers were not designed to accommodate a policy constant approach and that the cost allocation of expenses is currently done primarily on a per exposure basis (Miller, Transcript, at 777-79). This fact was accepted by Mercer, which recommended that, on an interim basis, the expense constant should be fixed on the basis of exposure (Exhibit 5.1, at 73).

Finally, Board Counsel suggested, and the parties agreed, that, because of the lack of certainty concerning the way in which the non-variable expenses are incurred, a study of this matter should be undertaken (Transcript, at 1306).

Board Decision

5.67 The Board agrees with Mercer that adoption of an expense constant is preferable to permitting general operating expenses to vary directly with premium. The Board also accepts the recommendation of Mercer, supported by the parties, that general operating expenses be considered, on an interim basis, to vary according to exposure, and that the expense constant be imposed on a per exposure basis.

5.68 Ultimately, it would be desirable and equitable to match the operating expenses more precisely with the items generating those expenses. Accordingly, the Board will conduct a study to determine the basis on which general operating expenses are incurred. The results of this study will be used by the Board in future years in determining whether the expense constant should be imposed on a per policy, per

exposure, or per coverage basis, or on the basis of some combination of these items. Parties will have an opportunity at a future industry-wide rate hearing to challenge any new basis chosen by the Board for establishment of the expense constant.

(ii) Premium Variable Expenses

5.69 The three expense items that, at present, vary directly with premium are OHIP charges, premium taxes, and commissions paid to insurance brokers or to agents employed by direct writers. The OHIP charges are not treated by the Mercer Report as premium variable expenses and, accordingly, are dealt with separately below in paragraphs 5.73 to 5.77.

5.70 Premium taxes are paid by every insurance corporation as a percentage of gross premiums payable to the corporation in respect of insurance contracts transacted in Ontario: Corporations Tax Act, R.S.O. 1980, c.97, s.66. Gross premiums are defined not to include premiums in respect of reinsurance ceded to the corporation by other insurance corporations. The Mercer treatment of premium taxes as a variable expense was not challenged in evidence.

5.71 At present, pursuant to agreements between insurers and brokers and direct writers and their employee-agents, commissions are ordinarily paid to brokers and agents as a percentage of premium. No evidence was introduced that challenged the Mercer treatment of commissions as a premium variable expense. The Insurance Brokers Association of Ontario (IBAO) introduced evidence (Exhibit 8.1, at 2) endorsing the Mercer recommendation and outlining its view of the relative advantages of a commission-based system of compensation over a fee-based system. The evidence of Ms. Bass (Transcript, at 170-71) was to the effect that the Mercer treatment of commissions simply reflected the way in which such expenses are currently incurred and did not necessarily reflect Mercer's endorsement of the present system of compensation.

Board Decision

5.72 The Board agrees that the rate making methodology should reflect the current treatment of premium taxes and commissions payable to brokers and agents as premium variable expenses. The Board expresses no view at this time concerning the propriety of a

commission-based, as opposed to a fee-based, system of compensating brokers and agents.

(j) OHIP Adjustment

5.73 According to the standard agreement between OHIP and individual insurers, an amount is paid to OHIP by insurers based on "the gross automobile third party liability premiums payable to the Insurer". The intent of the charge is to cover the costs that OHIP incurs when "an insured person suffers personal injuries for which he receives insured services under [The Health Insurance Act, 1972 (now R.S.O. 1980, c.197)]."

5.74 During the course of the hearing, the Board heard from a number of parties as to how these charges should be incorporated into the rate making methodologies used to establish province-wide rates or ranges of rates. Two basic alternatives were outlined. The first position, put forward by Ms. Bass (Transcript, at 168), was that "it belongs to the pure premium side of the formula". The rationale for this position was stated to be (Transcript, at 169) that the OHIP charge is "technically not an

expense, it's technically a truing up of the correct losses...". Ms. Bass went on to state that, since her recommended methodology includes an expense constant that does not vary by coverage, the OHIP subrogation charge "cannot continue to be applied to total liability premium because there's no specific identifiable expense charge for the liability premium...". The OHIP charge would have to be stated as a percentage of the liability pure premium in order to incorporate the charge into her recommended methodology.

5.75 The second position, put forward by the industry, was that the OHIP charge should be included in the rate making methodology as a percentage of the total third party liability premium. The major reason advanced for this position was put by Mr. Lehmann on behalf of State Farm (Transcript, at 860), who stated, "That is the way it is assessed for the companies and, therefore... I think the proper way to account for that then in the rating formula is to treat it as a percentage of the total premium...".

Board Decision

5.76 The Board has decided that, while the OHIP subrogation charge is currently assessed as a percentage of third party liability total premium, it should be included as part of the calculation of the third party liability pure premium for the purposes of the Board's methodology. This decision is made in light of the prior decision to use, on an interim basis, an expense constant that does not vary by coverage. It is the Board's view that, given the use of an expense constant, inclusion of the OHIP subrogation charge as a percentage of the total third party liability premium would require additional modifications to its recommended initial rate making process without any offsetting benefits.

5.77 The OHIP subrogation charge to be used should be based on the average percentage of total third party liability premium used by OHIP to charge companies for the most recent calendar year. This charge should be adjusted for any increase or decrease in OHIP costs projected to occur during the effective period of the Board decision regarding the rate or range of rates. It should then be translated into an

appropriate percentage to be applied to the third party liability pure premium only. The calculation used for this conversion should contain an explicit factor to adjust for the effects of the expense constant. Details of the calculation and any assumptions used should be fully disclosed at the time the rates or ranges of rates are proposed.

(k) Age and Symbol Drift

5.78 Over time, average premiums for physical damage coverages tend to grow, partly because of a shift towards the purchasing of more expensive automobiles. Because of existing rating structures, which utilize symbol groups to establish rating differentials, additional premiums are generated, even in the absence of a change in the rates or rating structure. This difference -- the so-called "symbol drift"-- needs to be offset in the total pure premium for physical damage coverages. "Age drift" is due to changes in insureds' buying habits, and reflects the tendency for the average age of vehicles to vary over time, with accompanying variation in the average premium for physical damage coverages.

5.79 The Board is currently considering adopting other methods of grouping vehicles, which may result in modifications to any methodology used to deal with age and symbol drift. Nevertheless, for purposes of completeness, and in order to preserve the Board's options concerning the adoption of other vehicle grouping methods, the age and symbol drift issue is dealt with at this juncture.

5.80 The Mercer Report proposed a method for measuring age-symbol drift simultaneously. In essence, the change in average premium resulting in age-symbol changes in the automobile population would be estimated by "weighting the current year's age-symbol factors against the prior and current year's distribution of exposures and measuring the change" (Exhibit 5.1, at 30).

5.81 Objections were raised by the industry to the approach recommended by Mercer to measure and reflect the symbol drift. The objections focused on the number of years of data used to measure the drift. The IBC's witness, Mr. Miller, stated that "estimating that symbol drift based on a one-year change may not be appropriate" and that "we are going

to have to see the data because a lot of that symbol drift ... has to do with the size of the increments ...". (Transcript, at 502). State Farm suggested in pre-filed evidence (Exhibit 10.1, at 4) that the Mercer methodology may not be "consistent with the symbol rating procedures used in Canada".

Board Decision

5.82 The Board has determined that the method of accommodating age and symbol drift proposed by Mercer should be adopted for purposes of both interim and ultimate rate making. Whether the method should measure this drift over more than one year will be left to be determined in accordance with actuarial judgment, once the data has been examined. As indicated, however, the adoption by the Board of other vehicle classification and rating methods, such as that proposed by the Vehicle Code Service, might require that the methodology be modified to suit the new rating methods.

(1) Balancing Margin

5.83 The Mercer Report made provision for a "balancing

margin", defined to be "that percentage of direct earned premium needed in order for the insurance industry's return to balance to the target return on equity" (ROE) (Exhibit 5.1, at 22-25). A similar, although not identical, model, termed an "underwriting margin", was presented by Dr. Basil Kalymon, a consultant retained by the Board, in Hearing No. 3, which was proceeding concurrently.

5.84 Evidence was led by the parties concerning certain discrepancies between the Kalymon and Mercer models. In particular, parties questioned the propriety of the premium-to-surplus ratio selected by Ms. Bass, the fact that the model assumed a pre-tax ROE and the fact that the model did not reflect such matters as the delayed receipt of premiums and payment of expenses. Ms. Bass indicated that she had assumed, in preparing her model, that it would be "parameterized" in Hearing No. 3, and testified that, although there were differences, the two models were reconcilable (Transcript, at 136-49).

5.85 Subsequent to the conclusion of Hearing No. 2, excerpts from the transcript of the evidence given by Ms. Bass in this hearing regarding the proposed

balancing margin model were introduced in Hearing No. 3 as Exhibit 2.3. The Panel of the Board determining the issues in Hearing No. 3 will decide between the Bass and Kalymon models, and the figure(s) that flow(s) from the application of the selected model will be utilized in the general rate making formula decided by the Panel for this hearing.

(m) Contingency Provision

5.86 Early in the hearing, objections were raised by the parties that the balancing margin model proposed by Mercer did not contain an explicit contingency provision to offset for systematic bias in the rate making process. Parties submitted that, when data is viewed over a long period of time, there may be observed a systematic variation between the ROE anticipated by insurers in setting rates and the results actually achieved. This phenomenon was said to reflect a failure or inadequacy in the rate making process, and to be compensated for or corrected by including in the rate making formula a contingency provision or factor that reflects the historic variation between expected and achieved results.

5.87 Ms. Bass did not dispute the validity of the concept of a contingency provision, but testified that she had assumed that the matter was being dealt with as part of the target ROE being parameterized in Hearing No. 3. The issue of the propriety of a contingency provision was subsequently remitted specifically by the Panel in Hearing No. 3 to be dealt with in Hearing No. 2, and a transcript of Ms. Bass' evidence in Hearing No. 3 relating to the matter was introduced as evidence in Hearing No. 2 (Exhibit 5.15).

5.88 The evidence established that a contingency provision is consistent with the Statement of Principles Regarding Property and Casualty Insurance Ratemaking adopted by the Casualty Actuarial Society (Exhibit 5.8). With respect to considerations that commonly apply to rate making methodologies, the Statement provides as follows (at 8):

> Rates
>
> ... The rate should also include a charge for any systematic variation of the estimated costs from the expected costs.

The propriety of a contingency provision was also accepted by witnesses for the Canadian Institute of Actuaries (CIA) in the course of cross-examination by Counsel for the IBC (R.L. Brown, Transcript, at 983-84).

5.89 The evidence further established that the variation or bias must be systematic and must be observed over a long period of time -- ordinarily ten to twelve years (Lehmann, Transcript, at 894; and Miller, Transcript, at 692). Mr. Brown, appearing on behalf of the CIA, also stated that evidence of historical bias or variation must be capable of demonstration; however, while provision for contingencies should be reflected in the rate making methodology, the formula need not contain an explicit contingency margin (Transcript, at 984-85). The evidence of the parties was to the effect that the result of a failure on the part of the rate making methodology to correct for systematic bias would be rate inadequacy, with consequential detrimental effects for both the industry and consumers (Acton, Transcript, at 628-31; and R.L. Brown, Transcript, at 986).

5.90 In response to questions posed by Board Counsel concerning the methodology to be employed by the Board in calculating a contingency provision on both an ultimate and interim basis, witnesses for the IBC and State Farm made the following recommendations. On a long term basis, it was proposed that the Board compare the actual profits achieved by insurers over a ten to twelve year period under Board-set rates with the anticipated profit provisions included by the Board in those rates, and fix a contingency factor equal to the difference between the anticipated and actual results (Miller, Transcript at 550-51; and Lehmann, Transcript, at 893-94).

5.91 On an interim basis, difficulties of proof of an appropriate contingency factor were acknowledged. It was suggested, however (Lehmann, Transcript, at 894-95) that the Board might conduct a survey of major Ontario insurers to determine the historical discrepancy between profit provisions included in their rates and actual results achieved under those rates. The Board might also look at other jurisdictions that regulate automobile insurance rates, such as New Brunswick, Florida and Massachusetts, to determine the extent of any

difference between projected and actual results in those jurisdictions.

5.92 Following the remission to this hearing of the issue of the propriety of including in the rate making methodology a provision for contingencies, Ms. Bass testified that a contingency factor should be explicitly recognized and added to the target ROE (Transcript, at 1195). On an ultimate basis, the results of the rate making process over a 10 to 12 year period could be tested retroactively for evidence of systematic bias. Ms. Bass stated, however, that if the Board were to establish a range of rates rather than a single benchmark rate, it could not be assumed that any difference between expected and actual results was caused by an inadequacy in the rate making process. Under a system permitting both a range of rates and deviations from that range, some insurers' rate decisions might be based not on actuarial analysis but on market considerations. A simple comparison of the target and attained ROE would not, therefore, indicate systematic bias. This could be achieved only through a difficult process, whereby company results were "normalized" to Board-established rates

(Transcript, at 1192-95). Board Counsel, in his closing submission, summarized Ms. Bass' evidence concerning this process as follows (Transcript, at 1308):

> ... [Ms. Bass] said that the premiums that should have been charged, had all of the companies used the rates promulgated by the Board, would have to be recalculated in any kind of analysis that the Board might undertake, and that the investment income and taxes paid on this reconstituted premium would also have to be estimated, and that after doing that kind of retrospective restatement of industry results then the Board could give some consideration to estimating the systematic bias that might be indicated.
>
> But she indicated that might be a very difficult process to undertake.

5.93 With respect to an interim methodology for establishing a contingency provision, Ms. Bass expressed serious doubts that systematic bias could be established for the insurance industry on a province-wide basis, as it would be necessary to examine each company's results over the past 10 to 12 years and to adjust them for rate making decisions that were not actuarially based (Transcript, at 1196-97, 1276-77). Ms. Bass suggested (Transcript, at 1197-98) that the contingency provision might be reflected during the interim period on a company-by-

company basis in the following manner. A company could establish a contingency factor on the basis of its own records and include that factor in its internal rate making process. A rate could then be chosen within the Board-established range of rates that included the contingency factor. If the range of rates proved insufficiently wide, the company could apply for a deviation and the Board, in determining whether to approve a deviated rate, could consider whether an appropriate contingency factor had been established.

5.94 In response to Ms. Bass' suggestion that, for the interim period, the contingency provision should be accommodated on a company-by-company basis within the range of rates and deviation process, it was strongly urged in closing argument that, notwithstanding the alleged difficulties of proof, parties should be given the opportunity to adduce evidence in Hearing No. 4 concerning an appropriate interim contingency factor (Finkelstein, Transcript, at 1334-38; and Brown, Transcript, at 1359-60).

Board Decision

5.95 The Board has concluded that the rate making methodology should contain an explicit provision to offset for systematic bias in the rate making process (hereinafter referred to as the "systematic bias factor"). The systematic bias factor may be a positive factor, a negative factor or neutral. In the long term, the systematic bias factor should be established with reference to the difference between the target ROE established by the Board and the ROE actually achieved under Board-set rates over a period of 10 to 12 years. The Board recognizes that these results will have to be adjusted to reflect the fact that rates other than the benchmark rates may have been chosen by individual insurers for non-actuarially-based reasons. The systematic bias factor established by the Board in the long term should be added to the target ROE.

5.96 The Board shares Ms. Bass' doubts that an interim systematic bias factor can be established on an industry-wide basis. The process of reconstructing the histories of individual insurance companies to demonstrate systematic bias and of proving that this

bias is a result of the rate making process would seem to present formidable, if not insurmountable, difficulties. Nevertheless, the Board accepts the argument of Counsel for the IBC and for State Farm that quantification of this factor has been reserved to Hearing No. 4 and that such quantification is a matter of evidence. While the Board is prepared to entertain evidence relating to the experience in other jurisdictions, it should be emphasized that the Board must be satisfied that such evidence is relevant to rate setting in the Ontario context.

5.97 If the industry is unable to adduce evidence, satisfactory to the Board, that establishes an appropriate interim industry-wide systematic bias factor, the Board considers that, as suggested by Mercer, the systematic bias factor can be reflected by individual companies choosing a rate within the permitted range of rates that includes their own estimate of an appropriate systematic bias provision. Should the range of rates be too narrow, in any given case, to accommodate a systematic bias factor, an insurer may apply to the Board for a deviation, and the Board, in determining whether to approve a

deviation request, will permit the company to adduce proof of systematic bias based upon its own history.

5.98 Counsel for State Farm argued that the proposal to accommodate the systematic bias factor within the range of rates on an interim basis is inconsistent with the recommendation that, in the long term, the factor be explicitly recognized, and is inconsistent also with the policy underlying a range of rates (Transcript, at 1359). The Board considers, however, that, in the absence of demonstrated proof on an industry-wide basis of historic systematic bias, the only alternative to the Mercer proposal is an explicit systematic bias factor of zero. The solution adopted by the Board represents, in its view, better protection against rate inadequacy than that alternative.

Classification Rate Making Techniques

5.99 Classification rate making refers to the process of distributing the average province-wide pure premium or loss costs for each coverage among classification cells. This distribution is usually accomplished by using the relative claim experience of insureds in

the classification cell as compared to the province-wide experience. Since many cells are likely to have few or no exposures, "a process must be found that is capable of producing a pure premium for each cell that is as close to the true underlying expected claim experience as possible while at the same time considering the practical implications of (possible) limited data credibility" (Exhibit 5.1, at 50). The Mercer Report advanced two techniques for classification rate making: the minimum bias technique and the greatest accuracy credibility technique (GAC).

5.100 The evidence suggested that the minimum bias technique is in common use today in establishing classification rate making differentials. Data is grouped according to broad classification criteria to obtain a significant number of exposures in each group (for example, rural/urban territories, experienced/inexperienced drivers). Credibility weighted relativities are obtained for the group data -- for example, for all rural drivers and for all experienced drivers. The product of the appropriate relativities gives the first cut at the relativity for a cell; thus, the relativity for experienced

rural drivers would be the product of relativities for rural drivers and experienced drivers. This first cut value is biased, however, because classification cells are unlikely to be independent as is assumed. The minimum bias technique is a means of correcting this bias. The method seeks to minimize the bias by minimizing the average absolute difference between estimated rates and the province-wide premium. The process is illustrated in Exhibits 8A to 8D of the Mercer Report.

5.101 The Mercer Report was unclear as to whether GAC should be viewed as a distinct alternative to the minimum bias technique. There appeared to be a perception on the part of the industry that GAC was being put forth as an alternative to minimum bias and that, in effect, it might potentially be used to the exclusion of the minimum bias technique. Ms. Bass provided clarification of this point (Transcript, at 178), pointing out that GAC would be used to augment minimum bias, and that GAC is embedded in the minimum bias technique.

5.102 Ms. Bass' testimony (Transcript, at 185-95) was to the effect that GAC should first be used to establish

credibility weights for each classification variable, and that these weights should then be used in the minimum bias technique. As Mercer pointed out, the establishment and use of credibility weights are not new to the insurance industry in Canada. What is novel is the Mercer proposal to use a relatively new technique -- GAC -- to establish the credibility weights. In essence, classification cells that are highly stable over time in terms of claims experience are given high credibility. The other aspect of GAC is the variation in classification relativities from the province-wide average. If the relativities tend to be very different from the province-wide average, then they are also assigned a high credibility. The object of GAC is to balance these two aspects of credibility. Traditional techniques, on the other hand, according to the Mercer evidence, base credibility only on stability over time, or on exposures in a cell whether or not they are stable over time. Credibility weights, however estimated, can be used, as illustrated in Exhibit 8C of the Mercer Report, to adjust class relativities in accordance with the minimum bias method.

5.103 The evidence adduced at the hearing appeared to indicate general agreement that the minimum bias technique is appropriate. On the other hand, there was evidence of concern about the use of GAC. In general, there was a lack of clarity as to the nature and intended use of GAC. In particular, it was argued that data sparsity in cells would cause difficulties in applying the technique (Exhibit 12.1, at 27). Mercer, by way of contrast, saw GAC as advantageous, in that stable cell data may be given a high credibility weighting even where the cell data is sparse. Another concern was raised by the CIA. While witnesses for the CIA admitted to a lack of familiarity with GAC, they nevertheless suggested that the technique may be impractical, in that it may lead to year-to-year fluctuations in insureds' rates (Transcript, at 972-74). The CIA recommended that minimum bias be used and that, instead of GAC, actuarial judgment be applied to provide a smooth evolution of differentials (Exhibit 7.5, at 4). Counsel for State Farm, Mr. Brown, submitted in closing argument (Transcript, at 1375-76) that, since GAC is not traditional in automobile insurance rate

making, it should not be used for the first year, but rather should be studied for potential use in later years.

Board Decision

5.104 In the Board's view, much of the industry's concern about GAC is mitigated by Ms. Bass' testimony that GAC is intended to augment minimum bias and not as a replacement for that technique. According to the evidence, the use of credibility weights in minimum bias is quite standard. The point of departure is that Mercer is proposing GAC as an improvement over traditional methods of estimating credibility weights for classification cell data. Whether GAC is indeed an improvement should, in the opinion of the Board, be judged on the basis of an examination of the results with, and without, GAC.

5.105 Accordingly, the Board has determined that, for purposes of both interim and ultimate rate making, both the minimum bias and the GAC techniques should be utilized for classification rate making. This decision is, however, subject to a number of qualifications. First, the minimum bias technique

should be used either alone or augmented by GAC; GAC should not be used on its own. Secondly, the use of GAC in classification rate making for Ontario should be evaluated on a continuing basis. This should be done by comparing rates arrived at with and without the use of GAC, using actuarial judgment. Finally, the Board notes Mercer's caution that neither technique will be effective if the Board Class Plan is fragmented into a large number of classification cells. Accordingly, it will be necessary to consider grouping similar classification cells if these techniques are to be employed.

Conclusions and Recommendations

5.106 It is therefore determined that:

1. The Board will adopt the general rate making methodologies proposed by Mercer in Exhibit 5.1, except to the extent that these methodologies are modified by the recommendations that follow.

Average Province-Wide Pure Premium

Pure Premium vs. Loss Ratio

2. The pure premium method will be adopted for the initial rate making process. Further study will be given to the loss ratio method with a view to

assessing its desirability as the method to be employed in the long term.

Adjustment for Semi-Annual Policies

3. For the initial rate making process, a factor of 50 percent should be used to calculate the premium for semi-annual policies.

4. Board Staff will devise a questionnaire, which will be sent to insurers, to determine current industry practices with respect to policy terms, billing procedures and receipt of premiums.

5. The results of this survey will be used to determine an appropriate factor for semi-annual policies in the future. The factor chosen will be subject to testing at a future industry-wide rate hearing.

Data Segmentation

6. For purposes of both interim and ultimate rate making, expected future claim costs should be estimated separately for each limit of liability. A similar approach should be used for physical damage coverages by deductible.

7. Rates should be established in an amount sufficient to avoid a shift in the distribution of policies by limit.

Number of Years of Historical Claims Data

8. a) In arriving at the average province-wide pure premium, data from the most recent accident year, valued at 15 months, should be used.

b) Actuarial judgment should be applied to this data, and it should be supplemented, where appropriate, with data from additional years of claims experience to smooth for aberrant conditions.

Claim Development Factor

9. a) Subject to recommendation 9(b), the Mercer methodology with respect to a claim development factor should be employed, including, where appropriate, the use of claims "counts and averages".

b) The claim development factor should be analyzed separately for the bodily injury and property damage components of third party liability coverage. If, in the interim period, it is determined, on the basis of actuarial judgment, that the coding is unreliable, the combined data should be used to adjust the results.

Claims Costs Trend

10. Claims cost trending procedures should be based on a combination of (1) the trend of historical pure premium; (2) the trend of historical claim frequency and historical severity, determined separately and then combined; and (3) the trend of some external index related to the cost of automobile insurance.

11. The appropriate weighting of the trend factors should be determined in Hearing No. 4.

12. Separate trend factors should be developed for bodily injury and property damage. If, in the interim period, it is determined, on the basis of actuarial judgment, that the coding of bodily

injury and property damage is unreliable, the two factors should be combined and the combined data used to adjust the results.

13. Where more than one year of claims data is used, trend factors using the current costing method should be adopted.

14. Known loss costs based on an experience period of 15 months should be used for purposes of trending.

15. For the interim period, trending should be based on the most recent six accident years, valued at 15 months. Ultimately, trends should be based on experience developed at quarterly intervals, using data from the most recent four quarters.

Allocated Loss Adjustment Expense

16. The allocated loss adjustment expense should be included in the loss experience for all coverages.

Excess Claims Procedure

17. In the interim period, judgment should be applied to accident year data to determine whether it contains catastrophe claims. The current IAO catastrophe factor of 2 percent should then be applied to the data as adjusted.

18. For purposes of ultimate rate making, both the method proposed by Mercer (paragraph 5.55) and that proposed by the industry (paragraph 5.56) should be employed, and judgment applied to the results.

19. Wind and water losses should be coded by the industry and reported under the Board Statistical Plan.

Expenses

20. The Board adopts the concept of an expense constant.

21. On an interim basis, the expense constant should be imposed on a per exposure basis.

22. The Board will conduct a study to determine the basis upon which general operating expenses are incurred, the results of this study to be used to determine whether, for purposes of ultimate rate making, the expense constant should be imposed on a per policy, per exposure, or per coverage basis, or on the basis of some combination of these items.

23. The general rate making methodology should reflect the current treatment of premium taxes and commissions payable to brokers and agents as premium variable expenses.

OHIP Adjustment

24. a) The OHIP subrogation charge should be included as part of the calculation of the third party liability pure premium.

    b) The OHIP subrogation charge to be used should be based on the average percentage of total third party liability premium used by OHIP to charge companies for the most recent calendar year.

    c) The charge should be adjusted for any increase or decrease in OHIP costs projected to occur during the effective period of the rates or ranges of rates, and should then be translated into an appropriate percentage, to be applied to the third party liability pure premium only. The calculation used for this conversion should contain an explicit factor to adjust for the effects of the expense constant.

d) Details of the calculation and any assumptions should be fully disclosed when the rates or ranges of rates are proposed.

Age and Symbol Drift

25. a) Subject to modification in the event the Board adopts another vehicle classification and rating methodology, the method of accommodating age and symbol drift proposed by Mercer should be employed.

b) Whether age and symbol drift should be measured over more than one year should be determined on the basis of actuarial judgment, once the data has been examined.

Balancing Margin

26. The Panel for Hearing No. 3 will decide between the Bass "balancing margin" model and the Kalymon "underwriting margin" model. The figure(s) that flow(s) from the selected model will be utilized in the general rate making formula arising out of this Decision.

Contingency Provision

27. The rate making methodology should contain an explicit provision, to be added to the target ROE, to offset for systematic bias in the rate making process ("systematic bias factor"). The systematic bias factor could be a positive, negative or neutral factor.

28. In the long term, the systematic bias factor should be established with reference to the difference between the target ROE established by

the Board and the ROE actually achieved under Board-set rates over a period of 10 to 12 years, as adjusted to reflect the fact that individual insurers may have chosen rates other than the benchmark rates for non-actuarially-based reasons.

29. The industry should be permitted to attempt to establish an interim systematic bias factor on an industry-wide basis in Hearing No. 4.

30. If the industry is unable in Hearing No. 4 to adduce evidence, satisfactory to the Board, that establishes an appropriate industry-wide systematic bias factor, individual companies may realize a systematic bias factor during the interim period as set out in recommendation 31.

31. An individual company may choose a rate within the range of rates permitted by the Board that includes its own estimate of an appropriate systematic bias factor. Should the range of rates be too narrow to accommodate such a factor in any given case, the insurer may apply to the Board for a deviation, and the Board, in determining whether to approve the deviation request, will permit a company to adduce proof of systematic bias based upon its history.

Classification Rate Making Techniques

32. For purposes of both interim and ultimate rate making, and subject to the qualifications set out in recommendations 33 and 34, both the minimum bias technique and the greatest accuracy credibility technique (GAC) should be utilized in classification rate making.

33. The minimum bias technique should be used either alone or in conjunction with GAC; GAC should not be used on its own.

34. The use of GAC should be evaluated on a continuing basis, by comparing rates arrived at with and without GAC, on the basis of actuarial judgment.

6. Uniform Rating Algorithm

6.1 Pursuant to a request by Board Counsel made on the first day of the hearing, the Board ordered that the following issues be added to the issues list (Transcript, at 161-62):

> 1. Should the Ontario Automobile Insurance Board adopt a uniform rating algorithm for calculating individual policy premiums?
>
> 2. If so, is there a general methodology that could be adopted by the Board at this time that could be made more specific in Part 4 of the industry-wide hearing dealing with rate making?

6.2 Mr. Khury, the Mercer consultant engaged by the Board, explained this issue in the written evidence as follows (Exhibit 5.11, at 1):

> Assume a setting where the Board has already set an automobile insurance rate (or range of rates), where two different companies have independently selected the identical point in the range, and the owner of an automobile applies for identical insurance coverage with each of the two companies. An important question is: Should this applicant receive two identical quotes? If the individual does not obtain

> two identical quotes, the question becomes: Why not?
>
> Assuming no operational problems such as coding or input errors, the difference must lie in the way the two companies combine various base rates and rating factors to arrive at the final policy premium.
>
> ....
>
> Today numerous differences exist in the way base rates are combined to produce individual policy premiums: Whether accident surcharges are applied to certain coverages or not, how the all-peril coverage premium is calculated, how multi-car discounts are applied, how premiums are rounded, etc.

In his evidence, Mr. Khury set out some numerical examples of this situation (Transcript, at 1021-27). These examples indicated that, although the printed manual rates may be the same for two companies, the bottom line price the consumer pays may be different: "...you start out with the same ingredients and you wind up with a different answer" (Transcript, at 1026). Mr. Khury pointed out that there was no insurer subterfuge in this approach; rather, it was a case of company rules being different. Mr. Khury stated (Exhibit 5.11, at 1):

> If the Board determines that the individual in the [abovementioned] example should obtain two identical quotes, the Board will need to adopt a standard formula for

> calculating individual policy premiums. In other words, the Board will need to assure itself that, no matter what specific base rates a particular company elects to use, the way the various rates for each coverage are combined by this company to produce an individual policy premium is identical to every other company's way.

6.3 Mr. Khury characterized the issue whether a uniform rating algorithm should be adopted as a public policy question, as opposed to an actuarial one (Transcript, at 1035, 1052). He suggested that a standard policy rating formula could help consumers comparison-shop directly among insurers, by ensuring that the price quoted by two insurers involves a similar application of operating conventions (for example, conviction surcharges) to the same coverages.

6.4 Mr. Khury recommended that, should the Board decide as a matter of policy to adopt a uniform rating algorithm, it should also "[d]ecide the framework for a standard policy-rating algorithm using a sufficiently general formula in order to preserve flexibility for the Board until hearing no. 4". A general formula was suggested for private passenger automobile (Exhibit A to Exhibit 5.11), and it was recommended that this formula be reviewed for completeness by a technical committee formed for

this purpose. A general, as opposed to specific, formula was proposed because of the current unavailability of data that could be used to test the impact, in terms of premium revenue, of adopting various options available with respect to a specific formula (Exhibit 5.11, at 4; and Transcript, at 1033-34).

6.5 The general algorithm proposed by Mr. Khury would be applied to a base rate that an insurer has filed and that has been approved by the Board. It would be used to calculate a total policy premium by adjusting the base rate for various factors not included in the base rate. The algorithm would be used by all insurers who write regulated automobile insurance in Ontario when calculating a total individual policy premium. The general algorithm would allow for a wide variety of possible factors, functions and parameters. These could be combined through multiplication, addition or a combination of both. The possible factors would include:

a) Non-variable expenses
b) Classification rating factors
c) Increased limits
d) Deductible levels
e) Claim and conviction history

The possible functions and parameters would include:

a) Territory
b) Coverage
c) Limit
d) Deductible
e) Classification rating factor increment
f) Exposure
g) Policy/Endorsement
h) Classification variable
i) Base rate
j) Increased limits factor/charge
k) Deductible factor/credit
l) Expense constant
m) Claim and conviction factor/charge

6.6 With respect to the question of the Board's jurisdiction to adopt a uniform rating algorithm, Board Counsel submitted (Transcript, at 1288-91) that, based on the language of the Act (sections 20(1) and (3), 29(1a) (b), and 1(1)) the Board "clearly" has the jurisdiction to adopt such a methodology. Board Counsel referred to section 20(1), which requires the Board, following an industry-wide hearing, to set a rate or range of rates for each class of risk exposure, and to section 20(3) of the Act, which provides as follows:

> 20(3) A rate or range of rates set by the Board may be expressed in dollar terms or in such other manner as the Board considers appropriate so that a person may determine

> the rate or range of rates for each class of risk exposure.

With reference to section 20(3), Board Counsel stated that it might well be inferred "that the legislation intends that a person be able to determine with some certainty the rate that ... he or she is in fact being charged by the company, and that really lies at the heart of the question of whether or not the Board should require a uniform rating algorithm" (Transcript, at 1290).

6.7 Board Counsel also referred to the definition of "rate", contained in section 1(1), as giving jurisdiction, in conjunction with section 20(1), to impose a uniform rating algorithm:

> 1(1) 'rate' means the amount payable under contracts of automobile insurance for an identified risk exposure whether expressed in dollar terms or in some other manner and includes commissions, surcharges, fees, discounts and rebates.

Mr. Armstrong submitted that the term "rate" includes "all of those things that go into the algorithm and means the amount payable under contracts of automobile insurance". He stated (Transcript, at

1400-01) that the rate was the amount paid by the consumer under a contract of insurance, that is, the price. The authority of the Board to set rates,

> ... is a very broad and extensive power and in my respectful submission it goes right down to the amount of money that is payable by the consumer.

6.8 Mr. Armstrong stated further (emphasis added),

> ... that it could be argued, in fact, that the definition of 'rate' in Section 1, sub-1 of the Act means that the Board must require the adoption of a uniform rating algorithm.
>
> It could be argued that there is no other way in which the Board could set a rate that included surcharges, fees, discounts and rebates if it did not set a rate that incorporated a uniform rating algorithm.

In reply, he submitted that the Board will not have acted in accordance with "the clear intention of [the] governing legislation" if the Board does not adopt a uniform rating algorithm (Transcript, at 1402).

6.9 Mr. Finkelstein, Counsel for the IBC, argued against adoption of a standard rating algorithm on two grounds. First, he submitted that the Board has no

jurisdiction to require such a methodology. Secondly, he argued that, as a matter of policy, such an algorithm ought not to be required.

6.10 On the question of jurisdiction, Mr. Finklestein's position was that the Act gives the Board authority to prescribe classes of risk exposure, to set rates or ranges of rates, and to prescribe procedures to assign insureds and vehicles to classes, but that there is no authority to impose a methodology. The Act "recognizes distinct responsibilities", and it was Mr. Finklestein's position that the insurer can employ any methodology it wishes, so long as it uses the Board Class Plan and Board-set rates. Mr. Finklestein argued further that the term "rate", as defined in the Act, cannot be interpreted to include such matters as the rounding convention (as would be contained in a standard formula): "... you are building an awful lot on to a definition and then imputing it into 20(1) to impose a standard industry algorithm." He went on to submit that the Act "is to set rates and not to set methodologies of doing business except insofar as setting rates is concerned" (Transcript, at 1342-48).

6.11 On policy grounds Mr. Finklestein argued, first, that insofar as the Act contemplates a range of rates, it does not matter to a consumer whether he or she is being charged a different rate "because a different base rate was chosen or because the same base rate was chosen and then a different algorithm was used" (Transcript, at 1348-49). Secondly, he submitted that rating algorithms require actuarial estimation of potential future claims costs, and that insurers compete by charging premiums that reflect their estimate of future claims potential. Mr. Finklestein argued that a uniform rating algorithm would eliminate this element of competition, and that competition should be fostered, not foreclosed (Transcript, at 1349-52). Finally, Mr. Finkelstein stated that, should the Board not accept his arguments as to jurisdiction and policy, and decide to require a uniform rating algorithm, it should, as proposed by Mr. Khury, set up a technical committee to review the suggested general formula (Transcript, at 1353).

6.12 State Farm made no submissions concerning the Board's jurisdiction. While Mr. Rogacki of Progressive Casualty did not address the jurisdictional question,

he did submit in closing argument that "the final result" is what matters; that is, "so long as two companies who have chosen the exact same point in a range quote exactly the same price to identical consumers, it doesn't really matter what method they use to arrive at that price and, therefore, a standard algorithm ... is really not necessary" (Transcript, at 1381-83). Finally, although Mr. Acton of Canada Life Casualty and Mr. Baggaley of the Consumers' Association of Canada (CAC) did not make argument, their submissions with respect to Board Counsel's request to include as an issue the matter of a standard rating algorithm are relevant to the extent that both parties considered it as part of the rate making methodology to be determined by the Board in this hearing (Acton, Transcript, at 22; and Baggaley, Transcript, at 23).

Board Decision

6.13 Turning first to the question whether the Board has the jurisdiction to adopt a uniform rating algorithm, the Board notes that not only is the Act new legislation, but the regulatory environment is also new for the industry. In light of this, the Board

considers it necessary to have regard to the stated legislative intent, as well as to the words of the statute.

6.14 On November 4, 1987, the then Minister of Financial Institutions, The Honourable Robert Nixon, stated in the Legislature prior to the introduction of Bill 2 as follows:

> Our insurance board will be effective in meeting the needs of Ontario consumers.
>
> ....
>
> [T]his Bill forms part of our ongoing efforts to protect consumers and bring stability and equity to the motor vehicle insurance market.

This intent was reinforced by Mr. Nixon in his remarks to the Standing Committee on Administration of Justice on January 11, 1988:

> Last April 23rd, when the Government first announced the initiatives related to automobile insurance, we had a very clear purpose in mind. That purpose was, and continues to be, to ensure the protection of consumers and to bring stability and equity to the motor vehicle insurance market.

He went on to state (emphasis added):

> It is also our intention that all the facts be out on the table so that the public can understand the factors that go into the making of the insurance rates they pay.
>
> ....
>
> In the Government's view, the creation of a uniform classification system will ensure a better basis with which to compare costs and it will eliminate unfair, discriminatory rating practices.

6.15 With respect to the interpretation of the Act, the Board has had reference to Driedger, Construction of Statutes (2d ed., 1983). Driedger states (at 87) that the modern approach to statutory interpretation is as follows:

> Today there is only one principle or approach, namely, the words of an Act are to be read in their entire context and in their grammatical and ordinary sense harmoniously with the scheme of the Act, the object of the Act, and the intention of Parliament.

The Board has also considered section 10 of the Interpretation Act, R.S.O. 1980, c. 219:

> 10. Every Act shall be deemed to be remedial, whether its immediate purport is to direct the doing of any thing that the Legislature deems to be for the public good or to prevent or punish the doing of any thing that it deems to be contrary to the public good, and shall accordingly receive such fair, large and liberal construction and interpretation as will best ensure the attainment of the object of the Act according to its true intent, meaning and spirit.

6.16 In the Board's opinion, the issue must also be viewed in the context of its overall mandate to set rates that are "just and reasonable and not excessive or inadequate". Tribunals that have a public interest mandate, of which this Board is one, must balance competing interests -- those of the consumer, of the industry, and of society as a whole. The Board must ensure that the rates paid by insureds and charged by insurers fit the statutory standard.

6.17 Turning to the specific wording of the Act, the Board finds that the requirement under section 20(1) that the Board set a rate or range of rates for each class of risk exposure, together with the definition of the term "rate" in section 1(1), are a sufficient basis for the Board's assumption of jurisdiction to require

a uniform rating algorithm. In the view of the Board, the plain meaning of the words in section 1(1) -- "rate means the amount payable under a contract of automobile insurance ... and includes commissions, surcharges, fees, discounts and rebates" -- supports the interpretation put forward by Board Counsel that the rate means the amount payable by a consumer under a contract of insurance and includes "all of those things that go into an algorithm". The fact that the definition employs the word "includes" suggests that the list that ensues ("commissions, surcharges, fees, discounts and rebates") is inclusive, not exhaustive, and is contrary to Mr. Finkelstein's construction of the section as not including other matters comprehended by a standard rating algorithm.

6.18 The Board is reinforced in its view by the indications of legislative intent and the principles of interpretation, discussed above. Section 20(3) of the Act is, as stated by Mr. Armstrong, consistent with the view that "the legislation intends that a person be able to determine with some certainty the rate that ... he or she is in fact being charged by the company". The Board, in accordance with section 10 of the Interpretation Act and giving the language

of the Act "fair, large and liberal construction and interpretation", finds that the scheme of the Act, the object of the Act and the intention of the Legislature all point in the same direction, that is, that the rates charged by insurers equate to the price paid by consumers. Insofar as methodology affects rates, and insofar as a rating algorithm also affects rates, the Board has concluded that it has the jurisdiction to deal with methodology and rating algorithms within its authority to set rates. For all these reasons, the Board finds that it has jurisdiction to require the adoption of a uniform rating algorithm as part of its rate setting power.

6.19 The Board has also determined, on policy grounds, that a uniform rating algorithm should be required. The Board does not agree with Mr. Finklestein's conclusions regarding consumers (Transcript, at 1349):

> ... the consumer doesn't care. He wants to know what the price is and he doesn't care why. And you can't explain to the consumer, well, my price is higher because I use a different algorithm but that is more actuarially sound. He is not going to care. All other things being equal, he is going to go to the insurer that charges him the lower price.

The Board believes that there are consumers who do care, and to that extent the Board must ensure that, in this regulated environment, consumers are able to find out why quotes from different insurance companies differ. The position of a consumer was put forth by Mr. Leaman, a limited intervenor in this proceeding. Referring to the imposition of conviction surcharges, Mr. Leaman's evidence stated (Exhibit 3.4, at 2, 3, emphasis added):

> ... the method by which the [premium] amount is determined was not revealed.
>
> ....
>
> Since Automobile Insurance is compulsory in Ontario there is an additional duty upon insurance agents and brokers <u>to fully inform</u> prospective [insureds] of <u>all elements</u> of an insurance contract. One cannot assume the average person would be informed as to trade practices in the insurance industry and therefore have all the necessary knowledge resulting in an equality of bargaining power between the insurer company and the insured individual.

6.20 It is also the Board's view that, to the extent that a rating algorithm represents an element of competition, imposition of a uniform algorithm does not foreclose or unduly limit competition. The real competition lies in the rates that insurance

companies choose before applying a rating algorithm. Competition based on rates should be the result of such factors as differing levels of operating efficiency and effectiveness. For the abovementioned reasons, the Board will adopt a uniform rating algorithm for calculating individual policy premiums.

6.21 Having determined, as matters of jurisdiction and policy, that a uniform rating algorithm should be adopted, it remains to be considered whether the Board should adopt at this juncture a generalized formula for such a uniform policy-rating algorithm, which would be of some assistance to insurers and which would preserve the flexibility of the Board in respect of rate making in Hearing No. 4.

6.22 The evidence of Mr. Khury, to the effect that adoption of such a generalized formula would benefit insurers, was not disputed by the parties. Mr. Khury stated (Transcript, at 1101):

> Something like this helps system design people and programmers to make some progress so as more details become available they actually already have a running start .... It is being helpful to companies who wish to take advantage of the leadtime.

> If the company says this is just too elaborate for our taste, we will wait until the decisions are made ... [t]hat option is certainly available. And I think in my opinion the more important aspect is the Board does confine itself to these boundaries by making the decision now, and there is sort of an element of faith here ....

6.23 The Board has determined that a generalized formula of the sort proposed by Mr. Khury, described in paragraph 6.5, and set out in Appendix E to this Decision, should be adopted. As recommended, a technical committee, consisting of actuaries and systems persons and operating under the direction of Board Staff, will be formed to consider the adequacy and completeness of this general formula. The constitution and terms of reference of the committee are set out in Appendix F. The committee will report back to the Board by November 4, 1988. The generalized formula recommended by the committee will be considered, and parameterized, in Hearing No. 4.

Conclusions and Recommendations

6.24 It is therefore determined that:

1. The Board will adopt a uniform rating algorithm for calculating individual policy premiums.

2. In order to permit insurers to begin programming systems, a generalized formula for a uniform rating algorithm, as set out in Appendix E, is adopted at this juncture.

3. A technical committee, consisting of actuaries and systems persons and operating under the direction of Board Staff, will be formed to consider the adequacy and completeness of the generalized formula. The committee will report back to the Board by November 4, 1988. The generalized formula recommended by the committee will be considered, and parameterized, in Hearing No. 4.

7. Rate Ranges

7.1 Under the Act, the Board has jurisdiction, and discretion, to set either a rate or a range of rates: section 20(1) of the Act provides that, "[u]pon classes of risk exposure being prescribed for a category of automobile insurance, the Board, following an industry-wide hearing, shall set a rate or range of rates with respect to each such class of risk exposure" (emphasis added). Accordingly, one of the issues set out in Procedural Order - 2 for determination by the Board in this hearing was whether "the proposed rate(s) [should] be a discrete value or a range of values" (Issue 2(e)). During the course of the hearing the Board requested that evidence be prepared and placed before the Board to assist in the determination of this issue. A document, entitled "An Approach for Establishing Ranges of Rates" was subsequently prepared by Mercer and filed as Exhibit 5.14.

7.2 The Mercer evidence discussed the implications of the Board's adopting a single rate (the "zero range

option", Exhibit 5.14, at 11-12) as opposed to a range of rates, and identified the following disadvantages that would attend such a decision: a large number of deviation filings; decreased competition; and market restriction. No party supported the zero range option, nor was it endorsed by Mercer.

7.3 The Mercer evidence stated (Exhibit 5.14, at 2) that, while there is little precedent in insurance regulation for a range of rates, the concept affords the Board "unusual opportunities for creative approaches to regulating automobile insurance ...". Mercer posited the following functions of a range of rates (Exhibit 5.14, at 4):

(1) encouraging fair competition in a regulated industry framework;

(2) minimizing insurance availability problems and limiting the role of the Facility Association to that of 'underwriter of last resort';

(3) increasing the attractiveness of Ontario as a place to conduct the business of automobile insurance;

(4) enabling the consumer to obtain maximum value for his/her automobile insurance dollar;

(5) minimizing unnecessary regulatory intervention;

(6) minimizing the cost of regulatory compliance for insurers;

(7) recognizing differences in skill levels (underwriting and claims) and in operating efficiencies among insurers; and

(8) affirmatively recognizing the continued relevance of risk selection as an integral part of the conduct of automobile insurance in Ontario.

All parties supported the policy reasons identified by Mercer as favouring a range of rates. In addition, in independent evidence, Mr. Taylor, testifying for the IBAO, identified the functions specified in items (1), (2) and (5) (Transcript, at 574-75). Mr. Lehmann for State Farm (Transcript, at 863) also cited the reasons set out in items (1) and (2) and referred to the ability of companies to accommodate their rating processes within a range of rates, a factor encompassed by item (6). Counsel for the IBC, Mr. Finkelstein, in closing argument, adopted the policy reasons cited by Mercer but suggested that they should not be regarded as exhaustive; parties should be entitled to raise other reasons in support of a range of rates in Hearing No. 4 (Transcript, at 1353).

7.4 The Mercer evidence also identified seven options available to the Board with respect to the structure

of the ranges. These options (which are described in more detail in Exhibit 5.14, at 5-8, and in the Transcript, at 1113-20) are listed below:

1. Establishment of ranges on loss costs and expense costs.
2. Application of ranges to line and coverage.
3. Establishment of the range symmetrically or asymmetrically around a benchmark rate.
4. Application of the range to base rates only.
5. Application of same range to all classification cells.
6. Application of different ranges to different groups of classification cells.
7. Variation of range widths by market share.

7.5 A number of points concerning these options were raised in evidence. With respect to option 3, Ms. Bass testified on behalf of Mercer that, in establishing asymmetrical bands, solvency considerations might enter into the decision whether to set a very low downward boundary. It should also be noted that option 3 assumes that the Board will set a benchmark rate, which may or may not be the case. Option 4 was stated by Ms. Bass to be the least flexible alternative, with options 5 and 6 providing increasing flexibility. Option 7

generated some controversy. As outlined by Ms. Bass (Transcript, at 1119), the proposal envisaged that wider ranges of rates might be made available to companies with a small market share in recognition of the fact that "it may be more difficult for smaller companies to make deviation filings, they may not have sophisticated rate-making machinery in place, and that they may have a need to be different from the average. The larger companies tend to control the average." Mr. Finkelstein raised the issue of the jurisdiction of the Board to vary the range in this manner (Transcript, at 1137). Counsel for State Farm, Mr. Brown, suggested that establishing wider ranges for companies with small market shares might give such companies an unfair competitive advantage (Transcript, at 1155).

7.6 The Mercer evidence raised a number of considerations relevant to the determination of the width of ranges (Exhibit 5.14, at 9-12). Mercer suggested that the width of the range might be influenced by the rigour of the deviation approval process and the existence of "sunset" provisions revoking deviation approvals at specified times. If the deviation process were rigorous and time-consuming and if deviations were

automatically revoked at regular intervals, it might be desirable to set wider ranges of rates, in order to limit the number of deviation applications, thereby minimizing demands upon the time and resources of the Board.

7.7 A second, major consideration identified by Mercer as affecting the optimal rate range is the degree of what Mercer termed "existing true market dispersion". Mercer noted (Exhibit 5.14, at 9-10) that price dispersion is at present a function of a number of operational differences, including "mechanical" differences (such as differences in rating factors, classification plans, and the treatment of accidents and convictions) and "qualitative" differences (such as differences in underwriting standards, operating efficiencies, claim philosophy and practices). As a result of the new regulatory environment, many of the mechanical reasons for existing price dispersion will be eliminated: there will be a uniform classification plan and, as a result of the Board's decision concerning a uniform rating algorithm (Chapter 6), rating conventions and the treatment of accidents and convictions will be standardized. Mercer suggested (Exhibit 5.14, at 12-13) that, with

the elimination of all or most of the mechanical reasons for price dispersion, the range of rates should reflect the amount of "true" or "qualitative" price dispersion in order to,

> ... re-establish a major portion of the remainder (non-mechanical or qualitative portion) of existing price dispersion with a minimum of effort and expense to as many insurers as possible, as soon as possible. Thus, insurers would have the opportunity to continue to seek the same target market, at the same pricing parity level as today, with many of the same underwriting and selection standards, as well as numerous other distinguishing operational conventions and efficiencies.

7.8 Mercer recommended that the Board commission a study of true (that is non-mechanical) price dispersion levels for all companies writing automobile insurance in Ontario and that the Board make the final rate selection "to meet the goals of restoring existing true price dispersion to as many insurers as possible ..." (Exhibit 5.14, at 13). In cross-examination, Ms. Bass elaborated on the reasons for a price dispersion study, stating that, unless the range of rates reflected existing true price dispersion, both consumers and insurers would experience dislocation

(Transcript, at 1165). Ms. Bass also expressed a preference for wider, rather than narrower, ranges, particularly in the inaugural year.

Board Decision

7.9 The Board has determined that, generally, ranges of rates, rather than specific rates, should be set by the Board for classes of risk exposure. The reasons identified by Mercer and the parties (paragraph 5.3) support this conclusion, and, as suggested by Mr. Finkelstein, additional reasons and functions may be raised by the parties in evidence in Hearing No. 4. Notwithstanding this statement of general policy, the Board will set a single rate for a class of risk exposure where it considers this to be advisable.

7.10 The determination of the option or options to be adopted by the Board in structuring the rate ranges will be made in Hearing No. 4, as will the selection of the width of the ranges. With respect to the first matter, the structural options, the Board recognizes that reservations have been expressed concerning its jurisdiction to establish ranges of

rates in accordance with certain of these options, in particular, option 7. The jurisdiction of the Board is to establish ranges of rates with respect to "classes of risk exposure" (section 20(1)). While the Board does not consider it necessary to decide the matter at this time, it notes that the remaining options provide a great deal of flexibility in the setting of rates.

7.11 With respect to the issue of the width of rate ranges, Mercer recommended (Exhibit 5.14, at 14) that the Board adopt true price dispersion as "the primary determinant" of the width of ranges. Ms. Bass qualified this recommendation, and acknowledged that the Board might wish to consider other factors (Transcript, at 1156-65). As suggested by Mr. Brown in closing argument (Transcript, at 1361), a study of existing true rate dispersion might indicate a very wide range that might not be sensible as determinative of the range of rates. While the Board notes that this matter is properly a matter to be determined in Hearing No. 4, it considers existing true price dispersion to be a relevant consideration in the selection of the width of the range of rates. Accordingly, the Board will request that Mercer

undertake a study of the existing true rate dispersion among Ontario automobile insurers. As suggested by Ms. Bass in the course of cross-examination by Mr. Connor of Progressive Casualty (Transcript, at 1174), the rates charged by the Facility Association will be included in the study of rate dispersion. The findings of the study will be introduced as evidence in Hearing No. 4, as will Mercer's written evidence (Exhibit 5.14) setting out the considerations relevant to a determination of the width of the rate range.

7.12 Mercer recommended (Exhibit 5.14, at 14) that the Board adopt a policy of setting rate ranges annually. This issue is closely connected to the timing of the rate setting process and is, in the view of the Board, a matter of policy to be considered in the context of Hearing No. 4.

Conclusions and Recommendations

7.13 It is therefore determined that:

1. a) Subject to Recommendation 1(b), the Board will set ranges of rates, rather then specific rates, for classes of risk exposure.

b) The Board will set a single rate for a class of risk exposure where it considers this to be advisable.

2. The determination of the option or options to be adopted by the Board in structuring the rate ranges, and of the width of the rate ranges, is referred to Hearing No. 4.

3. With respect to the issue of the width of the rate ranges,

   a) The Board will request that Mercer undertake a study of existing true price dispersion among Ontario automobile insurers.

   b) The rates charged by the Facility Association will be included in the study of existing true price dispersion.

   c) The results of this study, together with Mercer's written evidence setting out the considerations relevant to a determination of the width of the rate ranges (Exhibit 5.14), will be introduced as evidence in Hearing No. 4.

4. The question whether the Board should adopt a policy of setting rate ranges annually is referred to Hearing No. 4.

8. Deviation Procedures

Introduction

8.1 The Mercer Report (Exhibit 5.1, at 93 et seq.) recommended certain procedures and application forms for use by automobile insurers when applying during the interim period for rate deviations under section 23 of the Act. An issue before the Board was the reasonableness of, and possible alternatives to, the procedures recommended by Mercer.

8.2 The set of application forms recommended by Mercer for completion by applicants for deviation were intended to provide the Board with the type of information it would require in order to make a determination of the appropriateness of a particular insurer's application (Bass, Transcript, at 211). It was assumed by Mercer that the recommended procedure would be used primarily for companies wishing increases, and that the Board might require different or less detailed information for downward deviation requests (Transcript, at 216).

8.3 The forms, in essence, would require an applicant-insurer to document in considerable detail the manner in which the insurer's current rates are set. The insurer would also be required to indicate the maximum possible increase to any policy or group of policies currently written by the insurer that would result from the granting of the requested deviation (Item 11 of Exhibit 12 to Exhibit 5.1). Where the applicant-insurer is a member of a group of automobile insurance companies and the other members of the group write automobile insurance in Ontario, the applicant, in addition to information submitted on its own behalf, would be required to furnish analogous information for each member of the group or in respect of the experience of the group as a whole (Item 2 of Exhibit 11 to Exhibit 5.1).

8.4 Parties raised two major objections to the information requirements proposed by Mercer. First, it was argued that they were unduly detailed and burdensome, particularly for certain types of deviation request. Secondly, parties objected to the requirement that group data be provided upon a

deviation application by one member of a group. In addition to alleged difficulties arising out of the procedures recommended by Mercer, concerns were raised relating to the short time frame within which deviation applications must, as a matter of practice, be brought under the Act.

Nature and Extent of Information Required

8.5 The evidence of Mr. Miller, witness for the IBC, was to the effect that he considered the information requirements to be unduly detailed and burdensome, particularly for an application for a deviation based upon expenses (Transcript, at 513-23). This position was echoed by Mr. Lehmann on behalf of State Farm, who added that the deviation process could be particularly difficult for smaller companies, which might not have the detailed rate making data required by the forms (Transcript, at 897-98). Counsel for State Farm suggested in closing argument that the information required was more appropriate to a complete rate filing than a deviation request (Transcript, at 1367). Mr. Acton of Canada Life Casualty also testified that he considered the information requirements both too detailed and

unnecessary, particularly for expense deviations and for "obvious" problems (Exhibit 6.1, at 5-6; and Transcript, at 606-08, 646-49). The detailed information requirements, he suggested, must be assessed in the light of the very limited time frame within which, as a practical matter, a deviation must be sought if an insurer does not wish to adopt rates set by the Board under section 20 of the Act. Section 20(11) provides that rates set by the Board under section 20 take effect, unless the Board orders otherwise, 120 days after the Board makes its order setting the rates. Mr. Acton stated (Transcript, at 607):

> The deviation procedure and the timing prescribed by the legislation is such that most companies, when a new set of prescribed rates or range of rates is announced, will have to implement them. The 120 days specified in [the] Act don't leave you enough time to pull together a proper presentation, get a hearing, and have assurance that you will get a favorable result so that you can implement those rates into rate books, computer systems, et cetera, with the 45-day or 60-day lead time that is necessary for the consumer and broker satisfaction.
>
> So what will happen, I'm told by others--in Texas, this is what has happened where they prescribe a set of rates that must be implemented immediately, or near to immediately, people have tended to follow the rates. The deviation procedure is really only used by far-out companies or

> the very large companies that have the resources to get through that deviation procedure quickly.

8.6 The position of the IBC, as put by Mr. Miller, and by Mr. Finkelstein in closing argument (Miller, Transcript, at 521-22; and Finkelstein, Transcript, at 1339-41) was essentially as follows. Rather than require standard and predetermined information that may not be appropriate for all types of deviation request, the Board should permit an applicant-insurer to file only that information which, in its view, supports the deviation application. The Board would always have the right to require additional information and, if it were not provided, to refuse the deviation application. An insurer would be acting at its peril and risking delay or refusal in failing to supply necessary information. This was also the position adopted by Mr. Acton (Exhibit 6.1, at 6; and Transcript, at 649).

8.7 State Farm tendered in evidence, as a possible alternative to the Mercer forms, forms used by the automobile insurance regulatory body in Texas (Exhibit 10.4). These forms require, in essence, only information relating to calendar year profit and

loss. Counsel for State Farm suggested (Transcript, at 1367-68) that a task force be appointed to review the Mercer forms, the Texas forms and forms from other jurisdictions, in order to work out a series of information requirements that would provide the Board with necessary information while not constituting an undue burden on companies seeking deviations.

8.8 Ms. Bass expressed the view that the rigour of the deviation process should depend upon the width of the range of rates adopted by the Board (Transcript, at 1227-28). If the range were very wide, there would be few deviations, and those companies seeking deviations would likely have an experience very different from that of the remainder of the industry. In such a case, it would be appropriate to have a stringent deviation procedure that would require the applicant to disclose its rate making process and to justify exceeding the Board's ranges. If, on the other hand, the range were relatively narrow, there would be a larger number of deviations, by more typical insurers, and the burden on the resources of the Board would be correspondingly greater. This might argue in favour of less stringent deviation procedures.

Automatic Revocation of Deviated Rates

8.9 Mr. Acton raised in evidence (Exhibit 6.1, at 6; and Transcript, at 650-54), difficulties arising out of the automatic revocation of deviated rates under section 20(13) of the Act upon the coming into effect of new Board-set rates. If an insurer does not wish to adopt the new rates, the insurer will have to obtain a new deviation ruling. Mr. Acton argued that, in effect, insurers will be forced to implement the new rates and then file for a deviation. Mr. Acton suggested that, when a new set of rates is promulgated, insurers with deviated rates should be permitted to file a letter advising the Board that the insurer wishes to keep the same percentage differential from the Board-set rates, and then should have a further period of time within which to resubmit the deviation application.

Group Information

8.10 The evidence of Mercer was that the requirement for group information had been recommended because of a practice among insurance companies under common ownership to relegate less desirable risks to one of

the group of companies. The group information requirement would make available to the Board information concerning the financial condition of the entire group in the case of a deviation by the least profitable member of the group, and would permit the Board to determine whether prohibited subclassification was being carried out.

8.11 Mr. Miller took the position on behalf of the IBC (Transcript, at 787-95) that it was not appropriate to use the rating process as a means of enforcing the prohibition against illegal classification on the basis of, for example, age and sex. Mr. Miller referred to a situation where two companies under common ownership legally allocate risks on the basis of certain underwriting criteria; he suggested that the two companies should be treated no differently with respect to a deviation application than two unrelated companies which, on the basis of their underwriting criteria, happen to allocate risks in the same manner as the related companies. Mr. Brown, in closing argument on behalf of State Farm, expressed the view that the group information requirement was cumbersome and could constitute a barrier to timely resolution of deviation

applications. He also suggested that the group information requirement should be rejected for the time being, as there is no evidence that subclassification on prohibited grounds will take place. Board Counsel submitted (Transcript, at 1312-13) that the need for group information should be considered in the light of the enforcement mechanisms being contemplated by the Board.

8.12 In addition to objections based upon policy considerations, the issue was raised whether the Board has jurisdiction under the Act to require group information. Board Counsel took the position that the Board does have jurisdiction, and relied upon section 12 of the Act as giving the Board power to require the provision of group information in the exercise of its functions. Among the broad powers granted to the Board under section 12(1) are powers to (emphasis added):

> (a) make rules for the conduct and management of its affairs and for the practice and procedure to be observed in matters before it;
>
> (b) before or during a hearing, conduct any inquiry or inspection it considers necessary;

> (c) if, in its opinion, additional information is required by the Board, order an insurer or insurers' association or the Facility Association to provide the information in the possession of the insurer, insurers' association or Facility Association, as the case may be;

With respect to the underlined words in section 12(c), Mr. Armstrong argued that there is no limitation suggesting that "an insurer" must be the insurer applying for a deviation. The operative requirement is that the Board determine, in its opinion, that the information is required. Board Counsel also relied upon section 23(8) of the Act, which provides that an insurer applying for a deviated rate must demonstrate "that the circumstances of the insurer justify the use of the proposed rate." Mr. Armstrong submitted (Transcript, at 1397) that the phrase,

> ... imports into [section 23] a jurisdiction which is very broad and enables the Board to look at any number of factors in order to determine whether or not the circumstances of the insurer justify the use of the rate .... [T]he Board is, pursuant to that section ... clearly able to look at questions relating to the participation of the insurer in a group of companies.

8.13 Counsel for the IBC took a contrary position and argued that the Board does not have the jurisdiction to require group filings. He noted that the relevant provisions of the legislation all refer to "an" or "the" insurer, being the individual insurer applying for the deviation, not the group of which the insurer may be a member. With respect to the Board's powers under section 12, Mr. Finkelstein submitted that the section 12 powers "take their colour" from section 23, and that, since section 23 is an insurer-specific application, the section 12 powers must be limited in a similar fashion (Transcript, at 1404). Accordingly, he argued that, where the Board is able to require information, either initial or additional, it is able to do so only from the insurer-applicant. Mr. Brown, in closing argument on behalf of State Farm, agreed with the IBC legal position (Transcript, at 1369).

Board Decision

8.14 With respect to the nature and extent of information that should be required of applicants for deviations from Board-set rates, the Board agrees with the submission of Board Counsel that simple financial

information of the sort required by the Texas forms would be insufficient for Board purposes. The Board believes that, in considering a rate deviation request, the Board should have before it information concerning the manner in which the applicant has arrived at its conclusion that the requested rate level is needed; and in this respect, the manner in which the applicant calculates its rates would appear to be highly relevant. Accordingly, the Board has determined that, during the interim period, it will utilize the deviation procedures recommended by Mercer as the basis of its information requirements.

8.15 At the same time, the Board recognizes that some of the information requirements may be difficult to comply with, particularly for smaller companies, within a short time frame, and may, indeed, be unnecessary for certain types of deviation request. The Board will, therefore, entertain requests from individual insurers for exemptions from certain of the information requirements. Exemptions will be granted on a case-by-case basis, upon the insurer satisfying the Board that it is unable to provide the information or that the information is unnecessary in light of the type of deviation in question.

Similarly, should the Board consider that information additional to that suggested by the Mercer forms is necessary, it will require such additional information on a case-by-case basis.

8.16 Turning to the proposed group information requirement, the Board is persuaded by Mr. Armstrong's submission concerning its jurisdiction to require group filings. In the view of the Board, the powers under section 12 of the Act, and in particular section 12(1)(c), are ample to support such a requirement. Moreover, since it is necessary for the Board to examine the circumstances (that is, all the circumstances) of the insurer in a deviation proceeding (section 23(8)), it is artificial to draw the line at the insurer where the insurer's group may affect both the practices and the bottom line of the insurer-applicant.

8.17 Whether, as a matter of policy, the Board should use the group filing requirement as a means of determining whether subclassification on prohibited grounds is occurring is, in the view of the Board, a matter requiring further consideration in the light of other enforcement mechanisms available to the

Board and in the light, also, of any real need to resort to the power that becomes apparent in the future.

8.18 There may, however, be other valid reasons why the Board should have information concerning the rating procedures and financial practices and condition of other members of a group to which an applicant for a deviation belongs. It may be useful, for example, for the Board to have information concerning the allocation of expenses among the members of a group. The Board has determined that the question of the utility and the propriety of requiring group information should be referred to Hearing No. 4.

8.19 Mercer recommended, in the context of its evidence relating to rate ranges (Exhibit 5.14, at 14), that the issue of a "sunset" provision for deviated rates should be considered in Hearing No. 4. Mr. Acton gave evidence in this Hearing concerning difficulties arising out of the current "sunset" provision under section 20(13) of the Act, which provides for the automatic revocation of deviated rates upon the taking effect of new Board-set rates, ordinarily 120 days after such rates are set.

8.20 Section 20(13) must, however, be read in conjunction with section 23(9), which provides as follows:

> 23(9) Despite subsection 20(13), where an application is made under this section, the insurer, until the Board makes its decision with respect to the application, may continue to charge the rate for the class of risk exposure to which the application relates that it was charging immediately before the application was filed with the Board or it may charge a lower rate.

This provision permits insurers who apply for new deviated rates to maintain their current rates pending a decision by the Board, and accordingly operates to prevent an automatic revocation of deviated rates under section 20(13). Insofar as an insurer, pending the decision of the Board, could not take advantage of the general increase granted under section 20, the section does not go as far as Mr. Acton suggests should be the case. Nevertheless, the Board is not convinced that the protection afforded by the section is so inadequate as to require amendment of the Act at this time.

Conclusions and Recommendations

8.21 It is therefore determined that:

1. Subject to recommendations 2, 3 and 4, the Board will use the deviation procedures recommended by Mercer as the basis of its information requirements.

2. The Board will entertain requests from individual insurers for exemptions from certain of the basic information requirements. Exemptions will be granted on a case-by-case basis, upon the insurer satisfying the Board that it is unable to provide the information or that the information is unnecessary in light of the type of deviation in question.

3. Where the Board determines that information additional to that suggested by the Mercer forms is necessary, it will require such additional information on a case-by-case basis.

4. While the Board finds that it has jurisdiction to require group information, the question of the utility and propriety of requiring such information is referred to Hearing No. 4.

9. MISCELLANEOUS ISSUES

Rates for Facility Association and Non-Standard Insurers

9.1 During the course of the hearing, a question arose concerning the applicability of the Mercer rate making methodology to the setting of Facility Association rates and rates charged by non-standard insurers. Ms. Bass stated in evidence that she was proposing only one methodology, for all rates, and that the claims data upon which the rates would be based would include Facility Association data (Transcript, at 1277-78). She noted that there is provision in the Act for separate consideration by the Board of Facility Association rates, and that normal deviation procedures would be available to non-standard insurers.

9.2 A number of suggestions were made during the course of the hearing concerning ways in which the general rate making methodology could accommodate non-standard insurers. Mr. Connor and Mr. Rogacki of Progressive Casualty suggested to Ms. Bass and Mr. Miller that, if rates above the standard rates were

approved for the Facility Association, other insurers attempting to serve the same market might be permitted to take advantage of the rates set for the Facility (Connor, Transcript, at 433-36; and Rogacki, Transcript, at 564). Moreover, to the extent that the width of the rate bands reflects true price dispersion among insurers, including the Facility Association, the ranges might be sufficient to accommodate the non-standard market, particularly if, as suggested by Mercer in structural option 6, different ranges were to be set around groups of classification cells (Exhibit 5.14, at 8).

9.3 Reference was made by representatives of Progressive Casualty to the need for the preparation and presentation of specific evidence to address the manner in which rates would be established under the proposed methodology for the Facility Association and the non-standard insurers (Exhibit 9.1; and Rogacki, Transcript, at 831-37). Board Counsel advised that Mercer would not be presenting such evidence in Hearing No. 2, as the general rate making methodology was intended to apply. In cross-examination of Mr. Miller by Mr. Rogacki of Progressive Casualty, Mr. Miller expressed the view that such evidence was not

within the scope of Mercer's responsibility, although he agreed that the issue was an important one that should perhaps be addressed by the Board (Transcript, at 565). In his closing argument, Mr. Rogacki stressed the need to ensure that the rate making process meets the needs not only of the standard market but of high risk insurers and drivers (Transcript, at 1381-83).

Board Decision

9.4 The Board finds that the general rate making methodology that is the subject matter of this hearing is appropriate for determining industry-wide rates, including those of the Facility Association. There is authority under the Act for the Board to consider separately the position of the Facility Association and to approve rates that are appropriate for the Facility. Section 24 contains a procedure whereby, upon the establishment of rates under section 20, Facility Association rates are revoked and the Facility Association must apply, within 30 days of the order under section 20, for approval to promulgate a rate that is either a section 20 rate or a rate not within section 20. In the latter case, the Facility Association must demonstrate to the

Board that the proposed rate is just and reasonable and not excessive or inadequate, and the Board may approve, reject or vary the proposed rate: section 24(4), (5), (8). In addition, section 24(3) provides as follows:

> 24(3) The Board of its own motion may, and at the request of the Minister shall, review rates in respect of contracts of automobile insurance provided under the Plan of Operation under the Compulsory Automobile Insurance Act and, following a hearing, may set rates that it considers to be just and reasonable and not excessive or inadequate in respect of such contracts.

9.5 The Board agrees in principle that it is desirable that non-standard insurers continue to operate in the market place. The Board is of the view, however, that no separate rate making methodology is required for the establishment of rates for the non-standard market. The question of adequate rates is a matter to be determined in Hearing No. 4. Certain features of the Mercer methodology, discussed above in paragraph 9.2, appear to provide some flexibility in pricing higher risk classifications in a way that would permit non-standard insurers to continue to write those risks; the needs of the non-standard

markets will be borne in mind when making choices with respect to certain aspects of the methodology deferred to Hearing No. 4. To the extent that rates adequate for the non-standard market are not achieved, deviation procedures will be available to establish rates outside the range established under section 20. It may be that, should the rates and deviation procedures devised by the Board prove inadequate, a separate hearing should be held to deal specifically with the needs of the non-standard market. The Board makes no determination concerning this matter at this juncture.

Timing of Establishment of Rates and Ranges of Rates

9.6 The issue of the length of time Board-set rates will remain in effect arose inferentially in connection with two issues raised during the course of this hearing. As indicated in paragraph 7.13, Mercer suggested that the Board adopt a policy of setting rate ranges (and hence, presumably, rates) annually. In addition, Mr. Acton of Canada Life Casualty proposed as follows (Exhibit 6.1, at 3):

The authors of the report [Exhibit 5.1] have assumed that the rates calculated and approved by the Board will be for a known time period of exposure. Since the Board does not have an obligation to revise a set of rates once in place then the rates calculated should be approved in conjunction with a time period and a default increase factor for use if a new set of rates is not announced by the Board by the end of the expected time period for use.

This suggestion would reduce the risk of 'regulatory lag' which is identified in the report submitted by Mr. Kalymon to the board (page 24) [Exhibit No. 5.1 in Hearing No. 3], and would also mean that Board approved increases in rates could always be compared against the default trend increases as opposed to being compared to a zero increase. The political and public relations advantages of this suggestion are obvious.

Board Decision

9.7 Under the Act, new rates may be set by the Board following an industry-wide hearing, at which the rate or range of rates previously established by the Board may be reviewed and varied (section 20(1a) and (2)). The Act imposes no obligation on the Board with respect to the timing of the establishment of new rates; nor does it provide for the expiration or revocation of rates currently in existence except upon the variation of these rates by the Board following an industry-wide hearing.

9.8 While the Board is inclined to an annual setting of rates and rate ranges, it has concluded that the question of the timing of the establishment of rates and rate ranges should be considered in the context of Hearing No. 4.

Conclusions and Recommendations

9.9 It is therefore determined that:

1. The general rate making methodology should be used to determine industry-wide rates, including those of the Facility Association and non-standard insurers.

2. If necessary, the Board will use its authority under the Act to consider separately the position of the Facility Association and to approve rates that are appropriate to the Facility.

3. While no separate methodology is required for the establishment of rates for non-standard insurers, the Mercer methodology appears to provide some flexibility to the Board in accommodating the non-standard market.

4. To the extent that rates established in Hearing No. 4 are not adequate for the non-standard market, deviation procedures are available under the Act.

5. The Board makes no determination at this juncture whether a separate hearing should be held to deal specifically with the needs of the non-standard market.

6. The timing of the establishment of rates and rate ranges is referred to Hearing No. 4.

DATED at North York this 20th day of October, 1988.

M.P. Richardson
Vice Chair and
Presiding Member

A. Field
Member

B. Persaud
Member

G. Racicot
Member

APPENDIX A

Notice - Industry-Wide Hearing

Procedural Order - 1

Procedural Order - 2

Office of the Chairman
Bureau du Président

Ontario

Ontario Automobile Insurance Board

Commission de L'Assurance-Automobile de L'Ontario

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File No: I-88-1A,B,C,D

NOTICE
INDUSTRY-WIDE HEARING

THE ONTARIO AUTOMOBILE INSURANCE BOARD (the "Board"), on its own motion, will hold an Industry-Wide Hearing pursuant to section 20 of the Ontario Automobile Insurance Board Act, 1988, R.S.O. 1988, c.18. The Board is holding a hearing to set a rate or range of rates with respect to each class of risk exposure prescribed by Ontario Regulation 406/88 (the "classification system").

The Industry-Wide Hearing has been separated into four parts:

1. The hearing on the classification system and data availability to be used to set industry-wide rates and rate ranges effective January 1, 1989 will commence on Wednesday, August 10, 1988 at 9 o'clock a.m. at 2300 Yonge Street, 25th Floor, Toronto, under Board File No. I-88-1A.

2. The hearing on rate-making methodology will commence on Monday, August 22, 1988 at 9 o'clock a.m. at North York Memorial Community Hall, 5110 Yonge Street, North York, under Board File No. I-88-1B.

3. The hearing on profitability standards will commence on Monday, August 22, 1988 at 9 o'clock a.m. at North York Memorial Community Hall, 5110 Yonge Street, North York, under Board File No. I-88-1C.

4. The hearing on the proposed rates or range of rates, effective January 1, 1989, will commence following the conclusions of the hearings and the issuing of the decisions on the above three parts, at a time and date to be appointed by the Board, under Board File No. I-88-1D.

A PRE-HEARING CONFERENCE will be held on Wednesday, July 27, 1988, at 9:00 a.m., in the Ontario Room, Macdonald Block, Queen's Park, Toronto to deal with preliminary matters, including, but not limited to the following:

- written evidence to be pre-filed
- the interrogatory process
- the hearing process
- issues

IF YOU WISH TO PARTICIPATE AS A PARTY IN ANY PART OF THE HEARING, you (or your lawyer or agent) must file with the Board a written notice of your intention to participate as a party with the Board on or before MONDAY, JULY 25, 1988. A person who files such a notice intends to fully participate in the hearing.

INSTEAD OF PARTICIPATING AS A PARTY IN THE HEARING, you may comment on any of the issues as a LIMITED INTERVENOR by filing a letter of comment with the Board. A letter of comment should clearly state your views, set the grounds and the factual basis for your position, and indicate whether you intend to make an oral presentation to the Board. Letters of comment should be filed at the Board Office before the commencement of the hearing in which you are interested.

PROCEDURAL ORDERS as to how the matter will proceed may be issued from time to time. Copies of any procedural orders will be sent to all persons filing a notice of intention to participate. The Board has issued Procedural Order - 1 on July 6, 1988.

Manuals describing the practice, procedures and rules to be used by the Board are available free of charge from the Board Office and may be picked up during office hours Monday to Friday, 8:30 a.m. to 4:45 p.m. You may also examine all documents filed in these proceedings during office hours.

IF YOU DO NOT BECOME A PARTY TO THE HEARING OR INDICATE THAT YOU WISH TO MAKE AN ORAL PRESENTATION TO THE BOARD, THE BOARD MAY PROCEED IN YOUR ABSENCE AND YOU WILL NOT BE ENTITLED TO ANY FURTHER NOTICE OF THESE PROCEEDINGS.

DATED AT TORONTO THIS 6th DAY OF JULY, 1988.

S. Coroyannakis

ONTARIO AUTOMOBILE
INSURANCE BOARD
543 Yonge Street
2nd Floor
Toronto, Ontario
M7A 2H6
Phone No. (416) 963-3460
Fax No. (416) 965-8942
Collect telephone calls accepted.

Attn: Sophia Coroyannakis
Board Secretary

Ontario Automobile Insurance Board
Commission de L'Assurance-Automobile de L'Ontario

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File Nos. I-88-1A,B,C,D

IN THE MATTER OF the Ontario Automobile Insurance Board Act, 1988, S.O. 1988, c.18;

AND IN THE MATTER OF an industry-wide hearing by the Ontario Automobile Insurance Board pursuant to Section 20 of the said Act.

BEFORE: John P. Kruger, Chairman
Mary Elizabeth Atcheson, Vice-Chair
M. Patricia Richardson, Vice-Chair
Samuel Eckler, Member
Alvin Field, Member
Frank Marchington, Member
Laurel I. Martin, Member
Lorna Ann Milne, Member
Bhagwant N. Persaud, Member
Gilles Racicot, Member

July 5, 1988

Procedural Order - 1

UPON the Ontario Automobile Insurance Board (the "Board") having issued a Notice dated July 6, 1988 calling, on its own motion, an Industry-Wide Hearing;

AND WHEREAS the Board has separated the Industry-Wide Hearing into four parts:

- the classification system and data availability (File No. I-88-1A)
- rate-making methodology (File No. I-88-1B)
- profitability standards (File No. I-88-1C)
- the proposed rates or ranges of rates effective January 1, 1989 (File No. I-88-1D);

AND WHEREAS the Notice sets out the times and places for the four hearings to be held within the Industry-Wide Hearing;

AND WHEREAS the Board is of the opinion that it is necessary at this time to make procedural provisions for the Industry-Wide Hearing;

IT IS ORDERED THAT:

Pre-filing

1. A list of parties will be prepared by the Board Secretary and provided on or before Tuesday, July 26, 1988 to those persons who have indicated their intention to participate as parties (in accordance with the Notice) in all or part of the proceeding (the "Parties").

2. (a) The following will be provided to Parties (as they become known):

   (i) General Procedures Manual

   (ii) Draft Rules of Practice and Procedure for Hearings commencing August 1988.

   (b) The following material will be provided to Parties (as they become known) upon request:

   (i) DMR/Mercer Report, Recommendations and Issues concerning Data Capture, Data Quality, Database and Systems Requirements for the proposed Class Plan and Rate-making method

   (ii) Ontario Regulation 406/88 made under the Ontario Automobile Insurance Board Act, 1988- Classification System

   (iii) Mercer Study, Rate-making Methodologies Ontario Automobile Insurance

   (iv) Testimony of Basil A. Kalymon/Coopers & Lybrand on the Financial Structure, Cost of Capital and Underwriting Margins of the Ontario Automobile Insurance Industry

   (v) Update on DMR/Mercer Report

   (vi) Update on Mercer Study

(vii) Other material which is appropriate to be considered at the hearings.

Pre-Hearing Conference

3. A preliminary issues list, to be discussed at the Pre-hearing Conference on July 27, 1988, will be provided to all Parties on or before July 26, 1988.

Hearing - File No. I-88-1A

4. (a) Subject to paragraph 5, Parties who wish to submit written evidence on the classification system and data availability shall do so by filing it with the Board on or before Wednesday, August 3, 1988.

(b) The written evidence filed under paragraph 4(a) may include comments on the DMR/Mercer Report.

5. (a) Comments submitted in response to A Classification System for Automobile Insurance: A Draft for consultation, dated February 1988 (the "Consultation Draft") will be accepted as evidence at the hearing.

(b) Parties who submitted comments on the Consultation Draft and who wish to adopt those comments as their evidence may do so by filing with the Board a notice to that effect, in addition to any other written evidence they wish to file.

Hearing - File No. I-88-1B

6. (a) Parties who wish to ask interrogatories on the Mercer Study (rate-making methodology) shall do so by written interrogatories filed with the Board on or before Tuesday, August 2, 1988.

(b) Responses to said interrogatories shall be provided on or before Tuesday, August 9, 1988.

7. Parties who wish to submit written evidence on rate-making methodology shall do so by filing it with the Board and providing a copy to Parties, who requested the written evidence, on or before Friday, August 5, 1988.

8. (a) Board Counsel and Parties who wish to ask interrogatories on the written evidence filed under paragraph 7 shall do so by written interrogatories filed with the Board and provided to the relevant party on or before Friday, August 12, 1988.

(b) Responses to said interrogatories should be filed with the Board and provided to all Parties who requested the written evidence on or before Friday, August 19, 1988.

Hearing - File No. I-88-1C

9. (a) Parties who wish to ask interrogatories on the Kalymon/Coopers & Lybrand testimony (profitability standards) shall do so by written interrogatories filed with the Board on or before Tuesday, August 2, 1988.

(b) Responses to said interrogatories shall be filed with the Board and provided to all Parties, who requested the written evidence, on or before Tuesday, August 9, 1988.

10. Parties who wish to submit written evidence on profitability standards shall do so by filing it with the Board and delivering a copy to Parties, who requested the written evidence, on or before Friday, August 5, 1988.

11. (a) Board Counsel and Parties who wish to ask interrogatories on the written evidence filed under paragraph 10 shall do so by written interrogatories filed with the Board and provided to the relevant party on or before Friday, August 12, 1988.

(b) Responses to said interrogatories shall be filed with the Board and provided to all Parties, who requested the written evidence, on or before Friday, August 19, 1988.

Hearing - File No. I-88-1D

12. A procedural order will issue dealing with this hearing.

Limited Intervenors

13. (a) Limited Intervenors shall submit their letters of comment before the commencement of the relevant hearing.

(b) A Limited Intervenor who wishes to make an oral presentation to the Board shall indicate that intention in the letter of comment.

Costs - S. 16 of the Act

14. The issue of costs is to be addressed in the Industry-Wide Hearing and submissions on costs will be requested.

ISSUED AT TORONTO this 6th day of July, 1988.

S. Coroyannakis

Sophia Coroyannakis
Board Secretary

Ontario Automobile Insurance Board
543 Yonge Street, 2nd Floor
Toronto, Ontario
M7A 2H6
Phone No. (416) 963-3460
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Collect telephone calls accepted

File No. I-88-1B

IN THE MATTER OF the Ontario Automobile Insurance Board Act, 1988, S.O. 1988, c.18;

AND IN THE MATTER OF an industry-wide hearing by the Ontario Automobile Insurance Board pursuant to Section 20 of the said Act.

BEFORE: John P. Kruger, Chairman
Mary Elizabeth Atcheson, Vice-Chair
M. Patricia Richardson, Vice-Chair
Alvin Field, Member
Frank Marchington, Member
Lorna Ann Milne, Member
Bhagwant N. Persaud, Member
Gilles Racicot, Member

July 27, 1988

Procedural Order - 2

UPON the Ontario Automobile Insurance Board (the "Board") having issued a Notice dated July 6, 1988 calling, on its own motion, an Industry-Wide Hearing;

AND WHEREAS the Board has separated the Industry-Wide Hearing into four parts:

- the classification system and data availability (File No. I-88-1A)
- rate-making methodology (File No. I-88-1B)
- profitability standards (File No. I-88-1C)
- the proposed rates or ranges of rates effective January 1, 1989 (File No. I-88-1D);

AND WHEREAS the Notice sets out the times and places for the four hearings to be held within the Industry-Wide Hearing;

AND WHEREAS the Board issued Procedural Order - 1 dated July 6, 1988, which set out certain procedures for the Industry-Wide Hearing;

AND UPON the Board having held the Pre-Hearing Conference on July 27, 1988 in which, amongst other matters, issues were discussed;

AND WHEREAS the Board is of the opinion that it would be expedient to develop a list of issues to provide direction to the parties;

IT IS ORDERED THAT:

1. The list of issues, attached as Schedule "A" to this Order, are the issues which parties should address in the hearing under File I-88-1B in the Industry-Wide Hearing.

2. If a party wishes to add a further issue, the party should make a motion to the Board further to Rule 8 of the Draft Rules of Practice and Procedure for Hearings commencing August 1988.

ISSUED AT TORONTO this 28th day of July, 1988.

S. Coroyannakis

Sophia Coroyannakis
Board Secretary

Ontario Automobile Insurance Board
543 Yonge Street, 2nd Floor
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Collect telephone calls accepted

Schedule "A"
to Procedural Order-2
dated July 28, 1988
Under File No. I-88-1B

S. Coroyannakis

S. Coroyannakis
Board Secretary

ISSUES LIST

RATE-MAKING METHODOLOGY

FILE NO. I-88-1B

Issue 1: WHAT ARE THE IMPLICATIONS OF THE CLASS PLAN AS DECIDED BY THE BOARD IN HEARING #1 FOR THE PROPOSED INTERIM RATE-MAKING METHODS?

(a) How will the proposed interim rate-making methods be affected by data availability?

(b) To what extent should data from other jurisdictions or judgment be utilized to establish initial rates?

(c) How will the proposed interim rate-making methods be affected by the inability of insurers to adapt their policy writing and rating systems by January 1, 1989?

(d) How will the proposed interim rate-making methods be affected by the time frame within which rates must be established?

Issue 2: IS THE PROPOSED GENERAL RATE-MAKING METHODOLOGY REASONABLE?

(a) Is the proposed policy-constant approach for expenses reasonable, and does it provide for an equitable distribution of insurers expense costs among insureds?

(b) Is the proposed trend model reasonable?

(c) Is the concept of a balancing margin reasonable? How does the proposed balancing margin concept relate to the return on equity model proposed in the Coopers & Lybrand testimony?

(d) Is the proposed approach to classification rate-making, that is the minimum bias and greatest accuracy credibility techniques, reasonable?

(e) Should the proposed rate(s) be a discrete value or a range of values?

(f) What are the technical merits of the actuarial methodology employed?

(g) Does the methodology appropriately provide for the application of actuarial judgement?

Issue 3: ARE THE INTERIM DEVIATION PROCEDURES PROPOSED BY MERCER REASONABLE?

(a) What alternative deviation procedures, if any, are available?

APPENDIX B

List of the Parties who appeared

List of Limited Intervenors

List of Witnesses

PARTY	REPRESENTATIVE	WITNESS
Canada Life Casualty Insurance Company (Canada Life Casualty)	W.Acton President & Chief Operating Officer	W.Acton
Canadian Institute of Actuaries (CIA)	B.Wooding Executive Director	B.Wooding P.Hirst President-Elect R.Brown Vice-President D.Oakden Member, Property & Casualty Committee J.Cheng Member, Property & Casualty Committee
Consumers' Association of Canada (Ontario) (CAC)	C.Baggaley CAC Staff	
Dominion of Canada Group	J.Christie Vice President & Chief Actuary	
Insurance Brokers Association of Ontario (IBAO)	D.Dorsch T.Taylor Assistant General Manager	T.Taylor
Insurance Bureau of Canada (IBC), The Association of Canadian Insurers (ACI), The Ontario Mutual Insurers' Advisory Organization Inc. (IAO), Facility Association, Certain Independent Non-Aligned Insurers	N.Finkelstein M.Nicholson	M.Miller Principal, Tillinghast, a Tower Perrin Company

PARTY	REPRESENTATIVE	WITNESS
Progressive Casualty Insurance Company (Progressive Casualty)	A.Rogacki General Manager and Chief Agent for Canada H.Kelly Regional Sales Manager E.Ford Corporation Chief Actuary W.Conner Assistant Product Manager	
SAFECO Insurance Companies (SAFECO)	J.McArthur Resident Vice President Canada A.Hanks Regional Manager, Personal Lines Canada	
State Farm Insurance Companies (State Farm)	H.Brown M.Taylor	S.Lehmann Senior Actuary, State Farm Mutual Automobile Insurance Companies

BOARD COUNSEL

B. Armstrong
C. Cottle

WITNESS

I. Bass
Principal, William M. Mercer Limited (Mercer)

S. Khury
Managing Director, Mercer

LIMITED INTERVENOR	WRITTEN SUBMISSION	ORAL SUBMISSION
A.L. Smoke	Yes	No
Canadian Surety	Yes	No
Humewood Senior Citizens	Yes	No
Daniel Leaman	Yes	No
Ontario Risk and Insurance Management Society	Yes	No

APPENDIX C

Average Premium Charge (Including All Expenses)

All Private Passenger Coverages Combined

APPENDIX C

AVERAGE PREMIUM CHARGE (INCLUDING ALL EXPENSES)

ALL PRIVATE PASSENGER COVERAGES COMBINED

The premium charge, including all expenses, for "k" coverages purchased is:

$$\frac{\sum_{i=1}^{k} \{PP(i)*CAEF(i)*CDF(i)*TF(i)*XSCF(i)*ASDF(i)\}}{1.0 - BALM(i) - OHIP(i)} + EC$$

$$1.0 - COM - PTAX$$

where,

i = coverage (liability, collision, etc.)

k = number of coverages purchased

PP = pure premium

CAEF = claim adjustment expense factor, allocated and unallocated

CDF = claim development factor

TF = trend factor

XSCF = excess claim factor

ASDF = age-symbol drift offset

BALM = balancing margin

OHIP = loading for Ontario Health Insurance Plan

EC = expense constant

COM = commission percentage

PTAX = premium tax percentage

NOTES:

For all lines other than liability, OHIP(i) = 0. For fall lines other than comprehensive and all perils, XSCF(i) = 1.0. For all lines other than physical damage, ASDF(i) = 1.0.

APPENDIX D

Matrix of Rate Making Methodologies
Recommended in the Mercer Rate Making Study

MATRIX OF RATE MAKING METHODOLOGIES
RECOMMENDED IN THE MERCER RATE MAKING STUDY

<-----ELEMENT OF RATE----->	3rd Party Liability	Comprehensive	Specified Perils	All Perils	Collision	Accident Benefits
	<----------TYPE OF COVERAGE---------->					
Pure Premium	- incurred claims costs plus allocated expenses divided by exposure	- paid claims divided by exposure	- similar to Comprehensive	- similar to Comprehensive	- similar to Comprehensive	- similar to Liability
Claim Development	- incurred claims and allocated adjustment expenses adjusted to ultimate	- same as Liability except factors applied to paid not incurred losses	- similar to Comprehensive	- similar to Comprehensive	- similar to Comprehensive	- similar to Liability
Claim Cost Trend	- weighting of 3 estimators pure premium trend, frequency - severity trend and external trend	- same as Liability except different component of selected external index	- similar to Comprehensive	- similar to Comprehensive	- similar to Comprehensive	- similar to Liability plus wage trend factor
Claim Adj. Expense Factor	- factor to include unallocated claims expenses only	- same as Liability except includes all claims adjustment expenses	- similar to Comprehensive	- similar to Comprehensive	- similar to Comprehensive	- similar to Liability
Excess Loss Procedure	- not applicable	- to smooth for weather catastrophe	- similar to Comprehensive	- similar to Comprehensive	- not applicable	- not applicable
Age & Symbol Drift	- not applicable	- to offset for premium trend	- similar to Comprehensive	- similar to Comprehensive	- similar to Comprehensive	- not applicable
Balancing Margin	- to include time value & contingencies	- same as Liability	- similar to Comprehensive	- similar to Comprehensive	- similar to Comprehensive	- similar to Liability
OHIP Subrogation	- factor to account for OHIP bulk subrogation agreements	- not applicable	- not applicable	- not applicable	- not applicable	- not applicable

EXPENSE CONSTANT: Does not vary by line
PREMIUM TAX: Does not vary by line
COMMISSIONS: Does not vary by line

APPENDIX D

APPENDIX E

A Generalized Policy-Rating Algorithm

A GENERALIZED POLICY-RATING ALGORITHM

The elements of flexibility which this general algorithm aims to preserve until hearing no. 4 are briefly described below:

1. NON-VARIABLE EXPENSES

Non-variable expenses may be charged:

ON A PER POLICY BASIS

OR

ON A PER EXPOSURE BASIS

OR

AS A PERCENT OF PREMIUM

OR

AS SOME COMBINATION OF THE ABOVE OPTIONS

2. CLASSIFICATION RATING FACTOR

A classification rating factor may be determined as a function of any combination of classification variables as the Board may choose. Furthermore, such combination may be made multiplicatively, additively, or in some mix of additive or multiplicative methods.

3. INCREASED LIMITS PREMIUM

Increased limits premium may be calculated either as:

A PROVINCE-WIDE PERCENT OF BASIC LIMITS PREMIUM

OR

A FLAT ADDITIVE PREMIUM WHICH MAY VARY BY TERRITORY

4. DEDUCTIBLE CREDIT

Deductible credit may be calculated either as:

A PERCENTAGE CREDIT

OR

A FLAT DOLLAR CREDIT WHICH MAY VARY BY TERRITORY

5. ACCIDENT & VIOLATION HISTORY

Accident and violation history surcharges or credits may be applied to:

- Any combination of coverages

- Multiplicatively, province-wide; or additively, and may vary by territory.

The functions and parameters needed to calculate a final policy premium are:

- TERRITORY

Denote by "t", where "t" ranges over rating territories.

- COVERAGE

Denote by "c", where "c" ranges over policy coverages.

- LIMIT

Denote by "l", where "l" ranges over policy limits.

- DEDUCTIBLE

Denote by "d", where "d" ranges over deductible options.

- CLASSIFICATION RATING FACTOR INCREMENT

Denote by "f", where "f" ranges over values which are assigned to the various classification variables.

- EXPOSURE

  Denote by "e", where "e" ranges over exposures insured by the same policy.

- POLICY/ENDORSEMENTS

  Denote by "p/e", where "p/e" ranges over the policy and endorsements.

- CLASSIFICATION VARIABLE

  Denote by "c/v", where "c/v" ranges over classification variables.

- BASE RATE (FUNCTION)

  Denote by "BR". Assigns the applicable base premium.

- INCREASED LIMITS FACTOR (FUNCTION)

  Denote by "ILF". Assigns the appropriate increased limits factor.

- INCREASE LIMITS CHARGE (FUNCTION)

  Denote by "ILC". Assigns the appropriate increased limits charge.

- DEDUCTIBLE FACTOR (FUNCTION)

  Denote by "DF". Assigns the appropriate deductible factor.

- DEDUCTIBLE CREDIT (FUNCTION)

  Denote by "DC". Assigns the appropriate deductible credit.

- EXPENSE CONSTANT (FUNCTION)

  Denote by "EC". Assigns the appropriate expense constant.

- ACCIDENT & VIOLATION FACTOR (FUNCTION)

  Denote by "AVF". Assigns the appropriate accident and violation rating factor.

- ACCIDENT & VIOLATIONS CHARGE (FUNCTION)

  Denote by "AVC". Assigns the appropriate accident and violation surcharge/discount.

- SUMMATION OPERATOR (FUNCTION)

  Denote by "SUM". Performs the addition function.

- MULTIPLICATION OPERATOR (FUNCTION)

  Denote by "PRD". Performs the multiplication function.

Thus an insured risk, assigned to rating territory "t", having "e" exposures, insured by policy and endorsements "p/e", for coverages "c", with policy limits "l", and a deductible "d", would generate the following final policy premium:

$$\{\underset{p/e}{\text{SUM}}\ \underset{c}{\text{SUM}}\ \underset{e}{\text{SUM}}\ [(BR(t)*ILF(l)*(1-DF(d))*(1+\underset{c/v}{\text{SUM}}\ f)*$$

$$(\underset{c/v}{\text{PRD}}\ (1+f))+ILC(l,t)-DC(d,t))*AVF]+AVC(t))+$$

$$(\underset{e}{\text{SUM}}\ EC)+EC$$

Adopt the rounding convention of rounding to the nearest dollar after every calculation producing a dollar answer, and to two decimal places on all other calculations.

APPENDIX F

Technical Committee

APPENDIX F

TECHNICAL COMMITTEE

The Board has decided that a technical committee should be established to consider the adequacy and completeness of the generalized uniform policy-rating algorithm set out in Appendix E.

The committee is to make its report to the Board on or before November 4, 1988. The report will be submitted in evidence in Hearing No. 4.

The technical committee, to be chaired by Mr. Seeney, is created as follows:

Board Staff	1 person	N. Seeney
Board consultant	1 person	S. Khury
IBC	1 person	IBC to designate actuary
2 Insurers (to be selected by the Board)	4 persons	Each insurer to designate an actuary and a systems person
Total	7 persons	

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